

**Annotated Bibliography
On HIV/AIDS and Youth in
Sub-Saharan Africa**

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Occasional Report No. 10
November 2003



Acknowledgments

The *Annotated Bibliography on HIV/AIDS and Youth in Sub-Saharan Africa* was written by Vanessa Woog, research associate at AGI.

The author thanks Susheela Singh, Ann E. Biddlecom and Akinrinola Bankole for intensively reviewing drafts; Beth Fredrick and Jennifer Nadeau for comments; Patricia Donovan for coordinating the publication of this report; Kathryn Kooistra for providing invaluable research assistance; the Center for Adolescent Health and Development at the University of Minnesota and ETR Associates for sharing a World Health Organization worldwide review of adolescent risk and protective factors related to sexual and reproductive health; and Christine Panchaud for assisting in developing the project.

The author also thanks The Bill and Melinda Gates Foundation for its support of The Alan Guttmacher Institute's project Protecting the Next Generation: Understanding HIV Risk Among Youth, under which this report was prepared.

Suggested citation: Woog V, *Annotated Bibliography on HIV/AIDS and Youth in Sub-Saharan Africa*, Occasional Report, New York: The Alan Guttmacher Institute, 2003, No. 9.

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ISBN: 0-939253-60-7

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Introduction

This annotated bibliography summarizes research findings from studies specifically focused on youth and HIV/AIDS in Sub-Saharan Africa since 1995. It was developed as background material for a project, Protecting the Next Generation: Understanding HIV Risk Among Youth, that is currently being carried out by The Alan Guttmacher Institute and partners in Burkina Faso, Ghana, Kenya, Uganda and Malawi. The goal of this project is to provide an in-depth understanding of adolescent behaviors, attitudes and motivations to reduce the spread of HIV/AIDS. The bibliography and background research have helped to guide the course of the work and to inform the research design of the project.

The bibliography includes only substantive behavioral research studies, and therefore does not include reports that focus only on programs, interventions or policy; studies that are medical or purely epidemiological in content; and commentary or opinion pieces.

Studies were included if they specifically address HIV/AIDS-related issues among the youth population in Sub-Saharan Africa. Thus, for example, a study that covers the sexual behavior of youth, but does not directly relate sexual behavior to HIV risk or prevention, is not included. With these focused criteria for selection, 61 studies were identified for inclusion on the basis of their subject matter.

A wide range of nationally representative surveys, such as Demographic and Health Surveys (DHS), have been carried out and typically include males aged 15-59 and females aged 15-49. Most of the DHS surveys provide information on sexual behavior measures such as number of sexual partners and age at first intercourse. Some of the surveys include modules on HIV/AIDS, collecting information on HIV-related knowledge, attitudes and behaviors (see Table 1). The published DHS reports are a good resource because they include analyses on youth on

the topics of concern to this review. However, these reports were excluded as they are not specifically focused on HIV/AIDS among youth. Nevertheless, many (especially the most recent survey reports) contain information on HIV knowledge and risk factors for all people of reproductive age, and often present age specific detail.

This annotated bibliography is intended to be a resource for researchers, programs planners and policymakers interested in current research evidence on HIV/AIDS and youth in Sub-Saharan Africa.

Search Strategy

Searches in electronic databases for the years 1995-2002 included Anthropological Index, the International Bibliography of the Social Sciences, POPLINE, Population Index (available until 2000) and Sociological Abstracts. All of these indices cover foreign-language publications in their respective disciplines (see Table 2). The keywords “Sub-Saharan Africa and adolescents” were used in these searches. Additional systematic Internet or manual searches were also carried out in the following journals: *AIDS* (1997 onward), *Demography*, *International Family Planning Perspectives*, *Journal of Adolescent Health*, *The Lancet*, *Population and Development Review* and *Social Science and Medicine*. The journal *Culture, Health and Sexuality* was reviewed from 1999 (the year of its inception) to 2002. World Health Organization (WHO) and Joint United Nations Programme on HIV/AIDS publications were also searched. Finally, references cited by literature selected for inclusion in the bibliography were systematically checked to identify additional relevant studies.

The literature included in this bibliography is drawn from material indexed in the established databases mentioned above and mainly includes published studies. Most of the studies in the review

are published in research journals, but also include occasional or special reports and working papers.

Given the search criteria and strategies, and in spite of the extensive effort to include all relevant studies, it is likely that some relevant research studies were excluded from this review because they are unpublished and not available to be indexed (for example, reports prepared for national governments, international agencies or nongovernmental organizations) or are published but not yet indexed or indexed in databases not accessible to the author. As a result, some important work may have been overlooked.

Structure of Report

Studies are listed by name of first author, ordered alphabetically. A few aspects of each study were selected for inclusion in the summary: geographic coverage; methodology and sample (including sample size and composition when available); purpose of the study as stated by the authors; and main findings, selected with the aim of including substantively relevant data and summarizing the most important findings for which supportive evidence is presented.

Tables 3-6 index the selected studies, according to several criteria: major topics covered; research design and methodology; country or countries covered; and population subgroups covered. The layout for this report follows an approach used by WHO to present an annotated bibliography of young people's sexual and reproductive health.

Main Topics Covered

All selected articles focus on youth and explicitly address HIV-related subjects (for example, knowledge and attitudes about HIV/AIDS sexual behaviors, or health-seeking behaviors concerning HIV). Table 3 classifies the selected studies according to the main topics they cover: knowledge and attitudes, sexual behaviors, protective sexual behaviors (defined as condom use, abstinence and reducing the number of partners), the context of adolescents' lives, health-seeking behavior and the use of reproductive health services related to HIV. The majority of the selected studies examine the knowledge, attitudes and sexual behaviors of youth related to HIV; a few studies examine the context and sociocultural environment of adolescents' lives, and an even smaller number address the health-seeking behavior of youth and their access to services.

Most studies focus on specific subgroups and on specific areas or parts of a country, rather than on the national population of a country. Table 3 indicates if the study is national, subnational (covers only part of a country) or comparative (covers two or more countries).

Research Design and Methodology

Table 4 categorizes the studies according to the method of data collection used. The studies are organized according to broad categories: quantitative, qualitative or both qualitative and quantitative. The majority of studies use a quantitative approach, and only a few studies combine both qualitative and quantitative methods. These broad categories have been further disaggregated into the type of methodology used in the study (e.g., focus groups or survey). A study may appear more than once in the table if more than one type of methodology was used.

Another group of the selected studies are comparative and review the existing literature on HIV/AIDS and youth in several countries. In addition, two review studies are country-specific and review the literature on youth and HIV/AIDS in Tanzania and South Africa. These overview studies tend to go beyond the scope of the topics identified in the bibliography, as some provide information on programs and epidemiology, for example.

Country and Population Coverage

Table 5 organizes the selected studies according to their geographic coverage. A total of 13 countries are represented in the bibliography; the majority of studies focus on Ghana, Kenya, Nigeria, South Africa and Uganda. No studies were identified for a number of countries. This does not mean that no studies have been done in these countries, but rather that studies on these countries are probably few and may have been excluded because of the search and selection criteria.

The population subgroups that the studies focus on are identified in Table 6. Of the studies selected for inclusion, one or more addressed the following subgroups: youth (general), in-school youth, out-of-school youth, boys or girls only, young fathers, street youth and youth seeking services at a clinic. The "general youth" category corresponds to youth who were selected because they fell into a specified age-group. These youth were generally selected from households. The majority of selected studies covered youth in general or in-school youth only.

Annotated Bibliography

Adih WK and Alexander CS, Determinants of condom use to prevent HIV infection among youth in Ghana, *Journal of Adolescent Health*, 1999, 24(1):63-72.

Geographic Coverage: Yilo-Krobo District, Ghana.

Methodology and Sample: Interviewer-administered questionnaire to 601 sexually active men aged 15-24.

Purpose: To identify the psychological and behavioral factors that influence condom use to reduce the risk of HIV among young men in Ghana.

Main Findings

- Twenty-five percent of sexually experienced young men used condoms at last intercourse; 21% reported always using condoms during sexual intercourse.
- Self-efficacy to use condoms was the strongest predictor of ever using a condom; respondents who perceived a high level of self-efficacy to use condoms were more likely to ever have used a condom than respondents who perceived a low level of self-efficacy to use condoms; respondents who perceived low barriers to condom use were more likely to ever have used a condom than those who perceived a high level of barriers to condom use; young men who reported a high level of social support were more likely to have used a condom than those who perceived limited social support.
- Respondents who perceived high susceptibility to HIV and low barriers to condom use were more likely than others to have used condoms at last intercourse; respondents with high perceived self-efficacy and low barriers to condom use were

more likely than others to have used condoms at last intercourse.

Ajuwon AJ, Fawole F and Osungbade K, Knowledge of AIDS and sexual practices of young female hawkers in truck and bus stations in Ibadan, Nigeria, *International Quarterly of Community Health Education*, 2000, 20(2):133-143.

Geographic Coverage: Ibadan, Nigeria.

Methodology and Sample: Interviewer-administered questionnaire to 228 young female hawkers trading in bus and truck stations aged 10 and older (81% were 10-19).

Purpose: To address the AIDS needs of young female hawkers.

Main Findings

- The types of contraceptives known by the respondents were injection (29%) and condoms (26%); others mentioned liver salts, abortion and unspecified antibiotics (45%); the respondents had heard about these methods mainly from the mass media (43%) and friends (40%).
- Seventy-two percent knew that HIV could be spread by sexual contact, and 66% knew that the virus could be transmitted from an infected mother to her baby; 59% believed that HIV could be transmitted by sharing a toilet with an infected person, 60% believed that the virus could be spread by sharing utensils with infected persons and 27% believed that a cure for AIDS is available in Nigeria.
- Forty-two percent had ever had sex; 16% reported that their partner used a condom at first sex.

- The hawkers reported a high level of confidence to insist that a male partner use a condom (36%), but a low level of confidence to buy a condom from a shop (76%), request a condom from a health facility (78%) or help a male partner wear a condom (82%).

Akinyemi Z et al., *Reproductive Health of Nigerian Adolescents: Knowledge, Attitude and Practise Study*, Lagos, Nigeria: Society for Family Health, 1996.

Geographic Coverage: Lagos, Oyo, Kano, Plateau, Rivers and Enugu, Nigeria.

Methodology and Sample: Interviewer-administered questionnaire to 2,256 young people aged 13-19 and 12 focus group discussions.

Purpose: To provide baseline information on reproductive health knowledge, attitudes and practices of young people to assist in the design, monitoring and evaluation of a youth program.

Main Findings

- Main sources of information on sexuality were peers, mothers, teachers and the mass media; most important sources were peers for boys and mothers for girls; preferred sources of information on HIV/AIDS were the media, followed by friends, peers and school.
- Eighty-four percent had heard of HIV; the majority knew correct methods for preventing HIV infection; preventive measures most cited were condom use and abstinence.
- Forty percent said HIV could be acquired from public toilets, and 40% said that mosquitoes could infect a person with HIV.
- The greatest perception of risk associated with sex was the possibility of unwanted pregnancy, followed by STIs and then HIV/AIDS; 10% felt personally at risk for HIV/AIDS.
- Thirty-nine percent of respondents were sexually experienced; 79% of girls and 63% of boys reported that they only had serious partners; of currently sexually active youth, 46% of boys and 23% of girls had more than one partner at the same time.
- One-third of sexually experienced youth had ever used a contraceptive, most often the condom; condoms were most frequently used in nonserious relationships; 1% of sexually active youth said

they always used condoms; pharmacies were the main source of condoms; the main problem encountered with the purchase of condoms was that they were not available when sought (50%) and that youth were embarrassed (32%).

Anarfi JK, *Vulnerability to sexually transmitted disease: street children in Accra*, *Health Transition Review*, 1997, 7(Suppl.):281-306.

Geographic Coverage: Accra, Ghana.

Methodology and Sample: Interviewer-administered questionnaire to 1,147 street youth aged 8-19, four focus group discussions and 30 in-depth interviews; street youth were recruited through adults who work closely with the children (snowball technique).

Purpose: To identify the various categories of street children in Accra and examine some of the activities that may predispose them to contracting HIV infection.

Main Findings

- Ninety-three percent had heard of AIDS and were aware that AIDS cannot be cured; the level was significantly higher among males; a quarter of youth could not name any mode of transmission, and fewer than half could name two; the majority of the youth mentioned avoiding casual sex as a way of protecting themselves from getting AIDS.
- Misconceptions about ways of transmitting HIV included eating bad food; using a toilet; touching someone with AIDS; having contact with flies or dirt; sharing plates, clothes or a room with someone who has AIDS; engaging in witchcraft; and talking with someone who has AIDS.
- Street children had generally positive responses to AIDS educational campaigns and the kind of information that is given; many realized that AIDS is dangerous (41%) and that it is real (23%).
- Friends were cited as the main source of information on AIDS; a quarter mentioned the news media (television, then radio, then newspapers).
- Fifty-nine percent could not mention any other STIs other than HIV.

- Twenty-three percent reported that it was not possible for a person to go without sex (sex as a biological necessity was most frequently mentioned).
- Fifty-three percent had ever experienced sexual intercourse; 29% of the sexually active young people said they had a regular sexual partner; most of the street girls had sex for survival; 18 respondents reported engaging in homosexual behavior.
- Eighty-three percent knew about condoms; 21% used them in the last three months; half of the youth said that condoms could protect them from getting AIDS; most of those who were not using condoms just did not like them, and a few said they do not make sex enjoyable or they can break.
- Among those who ever contracted an STI, the majority self-medicated (34%) or went to the dispensary (31%); 18% went to the hospital.
- Sixty-five percent thought that Ghanaian children were at risk of getting AIDS.

Anarfi JK and Antwi P, Street youth in Accra city: sexual networking in a high-risk environment and its implications for the spread of HIV/AIDS, *Health Transition Review*, 1995, 5(Suppl.):131-152.

Geographic Coverage: Accra, Ghana.

Methodology and Sample: Interviewer-administered questionnaire to 250 street youth aged 10-24 and focus group discussions with 32 respondents; street youth were recruited through the Accra Metropolitan Assembly, which had organized the street youth into groups to facilitate their mobilization for voluntary work.

Purpose: To describe the socioeconomic characteristics of street-involved youth in Accra, their attitudes and knowledge about human sexuality, and their sexual behavior and perceptions about sexually transmitted infections (STIs) including HIV/AIDS.

Main Findings

- There was a general belief that normal human beings can never stay away from sex; respondents viewed sex as a biological need that must be met.
- Both males and females received information about sex from friends (62%); a very small proportion received some information from mothers (9%), and a similar proportion through eavesdropping.

- Ninety-five percent of the females and 78% of the males were sexually experienced; 91% of females and 70% of males were sexually active in the last three months.
- The main reason for engaging in sexual relations was pleasure, cited by 54% of young men and 36% of young women; commercial consideration was mentioned by 24% of the young women but only 1% of the young men.
- A lot of sexual activities take place among the street youth themselves.
- Awareness of STIs was high (98% had heard of the infections), and 22% reported having been treated for STIs; self-medication was the chief method used to treat STIs.
- Most knew STIs are transmitted by sexual contact, but misperceptions were common: 51% of females and 37% of males attributed the transmission to witchcraft.
- AIDS awareness was high (98%), and most respondents knew the routes of transmission; some misconceptions were held, such as AIDS is caused by kissing (52%), by witchcraft (38%) and by an act of God or supernatural causes (12%).
- Nearly 90% of the respondents knew of condoms, and 34% had used them; for those who used condoms the main reason was to prevent STIs (about 4% mentioned AIDS specifically); the main reason for not using condoms was that respondents just did not like them (33%); 11% felt that condoms do not give any protection.
- Nine percent said they had changed their sexual behavior since hearing of AIDS and were now practicing abstinence; another 10% insist on condom use.

Ankomah A, Condom use in sexual exchange relationships among young single adults in Ghana, *AIDS Education and Prevention*, 1998, 10(4):303-316.

Geographic Coverage: Cape Coast, Ghana.

Methodology and Sample: Six focus group discussions and 78 individual in-depth interviews with single adults aged 18-25.

Purpose: To discuss the personal and situational factors that than nonusers hinder the use of condoms.

Main Findings

- Premarital sexual life is woven around the notion of material recompense for sex and the importance of material gain from premarital sexual relationships (mothers sometimes encourage daughters to pursue material recompense for sex).
- Self-perceived vulnerability to HIV infection among participants was very low.
- The majority of respondents had never used a condom or had used one on a few occasions; most of the men complained about reduction in sexual pleasure and delayed ejaculation when condoms are used; condom use is enmeshed in gender-related economic relations; introduction of condoms is likely to jeopardize or minimize gains from premarital sexual relationships (women are likely to be ridiculed for suggesting condom use and called “cheap” or “loose”).

Araoye MO and Adegoke A, AIDS-related knowledge, attitude and behaviour among selected adolescents in Nigeria, *Journal of Adolescence*, 1996, 19(2):179-181.

Geographic Coverage: Ilorin, Nigeria.

Methodology and Sample: Self-administered questionnaire to 970 students aged 10-19.

Purpose: Provide an assessment of the knowledge, attitudes and behaviors related to AIDS.

Main Findings

- Three-quarters of students had heard about AIDS; the two most frequent sources of information were the mass media (58%) and peers (14%); 42% were taught about AIDS at school.
- Fifty percent of students knew that HIV is the causative agent; 8% and 4% ascribed the cause to bacteria and “juju” (African magical power), respectively.
- Between 18% and 41% of the students had erroneous views about modes of transmission.
- Those who knew that HIV/AIDS and other STIs are preventable by having a single partner were less likely to have had multiple sexual partners.
- Condoms were the most common contraceptive method currently used.

Arowojolu AO et al., Sexuality, contraceptive choice and AIDS awareness among Nigerian undergraduates, *African Journal of Reproductive Health*, 2002, 6(2):60-70.

Geographic Coverage: Ibadan, Lagos and Ogun, Nigeria.

Methodology and Sample: Self-administered questionnaire to 2,388 students aged 16 and older (74% were 16-25) from six universities.

Purpose: To understand sexual behavior and contraceptive practices related to HIV awareness.

Main Findings

- Women were more likely than men to have relationships with older partners; females cited monetary gains, security of future marriage, maturity and understanding by older partners as reasons for engaging in relationships with older partners; among 16-25-year-olds, 60% had two or more current sexual partners.
- Condom (93%) and withdrawal (67%) were the most known contraceptive methods; 38% of respondents had ever used a contraceptive method, and 34% were currently using a method; current contraceptive users aged 16-25 most commonly reported the condom (73%), withdrawal (28%) and rhythm (27%) as their method of choice; reasons most frequently cited among 16-25-year-olds for nonuse of contraception included fear of side effects and health concerns (15%) and religion (11%); sources of supply for contraceptive methods reported by the students were pharmacy shops (58%), hospitals or clinics (18%), community distribution agents (11%), patent medicine stores (11%) and drug hawkers (3%).
- All respondents identified sharing of blades, sharing of injection needles, blood transfusion and sexual intercourse without condoms as modes of HIV transmission; 65% believed that HIV could be transmitted through French kissing; all respondents identified condoms, sexual abstinence and not having sexual partners who use intravenous drugs as ways to reduce risk of HIV transmission.
- Twenty-six percent of respondents used condoms to prevent HIV transmission only, 58% used condoms to prevent STIs and 73% used them mainly for contraception.

Asimwe-Okiror G et al., Change in sexual behaviour and decline in HIV infection among young pregnant women in urban Uganda, *AIDS*, 1997, 11(14):1757-1763.

Geographic Coverage: Jinja, Kampala, Nsambya and Rubaga, Uganda.

Methodology and Sample: Interviewer-administered questionnaire to a representative sample of 1,438 adults in Kampala and 1,545 adults in Jinja aged 15-49 (with analysis for 15-24-year-olds) and data from sentinel surveillance sites on HIV prevalence.

Purpose: To measure prevention indicators and describe sexual behavior that may explain a decline in HIV prevalence.

Main Findings

- Proportions of males and females aged 15-19 reporting that they never had sex increased from 31% to 26% in 1989 to 56% and 46% in 1995, respectively; median age at first intercourse increased from 16.6 to 17.4.
- The proportion of nonregular partners among those who have been sexually active in the past 12 months decreased from 30% in 1989 to 19% among 15-19-year-old males; the prevalence was stable among 15-19-year-old females (12% in both 1989 and 1995).
- The proportion of sexually active respondents aged 15-19 who reported having ever used a condom increased from about 20% in 1989 to over 60% in 1995 among males and increased from about 10% to over 40% among females.
- From 1991 to 1996, significant declines in HIV prevalence were observed among 15-19- and 20-24-year-olds: From 28% to 10% in Nsambya, from 21% to 5% in Jinja (only among 15-19-year-olds) (data for Kampala not presented).

Awusabo-Asare K et al., 'All die be die': obstacles to change in the face of HIV infection in Ghana, in: Caldwell JC et al., eds., *Resistances to Behavioural Change to Reduce HIV/AIDS Infection in Predominantly Heterosexual Epidemics in Third World Countries*, Canberra, Australia: Australian National University, National Centre for Epidemiology and Population Health, Health Transition Centre, 1999, pp. 125-132.

Geographic Coverage: Central Region, Ghana.

Methodology and Sample: Interviewer-administered questionnaire to 1,350 students in four levels of the educational system (secondary school through university level) and discussions held in schools.

Purpose: To examine young people's attitudes towards premarital sex, HIV/AIDS and contraception.

Main Findings

- Over 80% of students did not consider themselves at risk for HIV; reasons included not being sexually active and being a virgin, being a student and adhering to a religion that opposes to premarital sex.
- Among students aged 15 or older, the condom was the most frequently mentioned modern method of contraception (13%); over 40% agreed with the statement that a girl who carried a condom in her purse was a bad girl; fewer than 17% of students indicated that they could definitely purchase condoms.
- Fifty percent said they could discuss condoms with peers, 30% could discuss with their father, 40% with their mother and 50% with a sibling.
- Eighty percent of respondents agreed that there should be no sex before marriage for both males and females; however, 37% of the males and 24% of the females reported that premarital sex could be allowed for people who intended to marry.
- Some young people experienced pressure to have sex from their girlfriend or boyfriend (19%), schoolmates (13%), neighbors (13%), relatives (8%) and teachers (6%).

Bandawe CR and Foster D, AIDS-related beliefs, attitudes and intentions among Malawian students in three secondary schools, *AIDS Care*, 1996, 8(2):223-232.

Geographic Coverage: Blantyre and Zomba, Malawi.

Methodology and Sample: Self-administered questionnaire to 191 school students aged 15-23 from three secondary schools.

Purpose: To investigate factors influencing the intention of students to engage in protective behaviors.

Main Findings

- Sixty percent of sexually active students had ever used condoms.
- There was high awareness of and concern about HIV, but respondents did not perceive themselves to be at risk of contracting AIDS.
- Respondents reported positive views that condom use would prevent STIs, including HIV, and pregnancy, but results suggested that respondents believed that condoms reduce pleasure.
- Intentions of students to use condoms and to stick to one sexual partner were mainly influenced by attitudes.

Bohmer L and Kirumira EK, Socio-economic context and the sexual behavior of Ugandan out of school youth, *Culture, Health and Sexuality*, 2000, 2(3):269-285.

Geographic Coverage: Wakiso and Kamengo (two counties of Mpigi District), Uganda.

Methodology and Sample: Nine peer discussion groups, which met over three months (weekly meetings for 1-2 hours) and included 99 out-of-school males and females aged 12-19.

Purpose: To document linkages between sexual meanings and practices and economics, environmental influences and gender dynamics; to better understand the context in which young people's behavior and practices occur as well as their own perceptions of their sexuality and sexual relationships.

Main Findings

- Peers and radio programs were cited as the most common sources of information about sexuality and HIV/AIDS; watching pornographic films, overhearing conversations and spying on elder brothers having intercourse were also ways of obtaining information.
- Females were traditionally educated by aunts concerning how to behave sexually in marriage, but aunts were no longer playing this role.
- The most common location of sexual activity was the bush, where girls may be forcibly taken against their will; discos were also mentioned; community events such as weddings and funerals were also associated with a high risk for contracting HIV/AIDS.
- Males viewed sex with young females as less intimidating than with older females (because they do not have to worry about satisfying them sexually); young females are also seen as less likely to be infected with HIV.
- A female cannot verbally propose sex to a male (but may do so in nonverbal ways).
- Concern was expressed about older men infecting young girls with HIV/AIDS; financial and material gain was the primary reason why adolescent women went out with older men.
- The primary strategy used to get a girlfriend was gift giving; it was acknowledged that the female desire for gifts often led to unwanted pregnancy as well as HIV/AIDS.
- Out-of-school youth experienced pressure to contribute to family income; in the absence of formal income opportunities, girls often trade sex for money or gifts.
- Both sexes were constantly assessing potential partners for HIV risk (e.g., if a girl accepts sex right away or goes to a disco, she is considered to be a high-risk person).

Evelyn UI and Osafu O, Sexual behaviour and perception of AIDS among adolescent girls in Benin City, Nigeria, *African Journal of Reproductive Health*, 1999, 3(1):39-44.

Geographic Coverage: Benin City, Nigeria.

Methodology and Sample: Interviewer-administered questionnaire to 723 secondary school adolescent females aged 13-18, randomly selected

from two girls' schools (schools were randomly selected from a pool of 10 schools).

Purpose: To investigate the perception and knowledge of AIDS and sexuality among adolescent women.

Main Findings

- Ninety-five percent of female students were aware of AIDS; 84% knew that AIDS is incurable; 40% knew that the use of a condom can prevent AIDS; 64% knew that AIDS can be transmitted through sexual intercourse.
- Despite high levels of awareness, 9% knew that AIDS was caused by a virus, 7% believed AIDS is curable and 12% believed that the disease can be prevented with drugs.
- Among respondents who have had sexual intercourse, 66% never used the condom and 27% used condoms regularly.
- Main sources of information about AIDS were schoolmates (22%), friends (20%) and school teachers (17%).

Fawole OI, Asuzu MC and Oduntan SO, Survey of knowledge, attitudes and sexual practices relating to HIV infection/AIDS among Nigerian secondary school students, *African Journal of Reproductive Health*, 1999, 3(2):15-24.

Geographic Coverage: Ibadan, Nigeria.

Methodology and Sample: Self-administered questionnaire to 450 secondary school students aged 12-26 randomly selected from four randomly selected mixed-sex public schools.

Purpose: To study the AIDS-related knowledge, attitudes and sexual behavior of secondary school students.

Main Findings

- Ninety percent had heard about AIDS; 83% knew the importance of sexual intercourse as a mode of transmission; avoiding indiscriminate sex was most frequently cited as a way of preventing HIV, followed by having one partner, avoiding sharing needles and condom use.
- Forty-eight percent knew it was possible to be infected with HIV and look healthy; 42% knew that there is no cure for AIDS.

- Electronic media were the main source of information on AIDS (68%), followed by health workers (16%).
- Fifty-five percent felt AIDS was a problem in Nigeria; 71% admitted they would dislike having someone with AIDS near them; 68% felt they can never be infected; 30% felt AIDS was a curse from God; and 15% felt AIDS was due to witches and wizards.
- Sixty-four percent were willing to be screened if given the opportunity for a free test.
- Among the sexually active, 47% used a condom at last sexual intercourse; 14% reported using the condom consistently; among those who did not use a condom, the main reason for nonuse was reduced sexual enjoyment; those who did not use a condom reported other ways of protection, such as careful selection of sexual partners (30%), reduction in frequency of sexual intercourse (17%), going for regular medical examinations (10%) and taking salt or lemon drinks (6%).

Feldman DA et al., HIV prevention among Zambian adolescents: developing a value utilization/norm change model, *Social Science and Medicine*, 1997, 44(4):455-468.

Geographic Coverage: Lusaka, Zambia.

Methodology and Sample: Interviewer-administered questionnaire to 276 males and females aged 14-20 and 12 focus groups.

Purpose: To lay the foundation for the implementation and evaluation of an AIDS prevention program for high-risk adolescents and to propose a value utilization/norm change model to explain change at the sociocultural level.

Main Findings

- Ninety percent of the girls who were sexually active in the past 12 months received money or gifts for sex at least on some occasions.
- Eighty-eight percent saw AIDS as a serious threat to their local community; 57% were worried about getting AIDS themselves; 55% believed that they had no chance of getting AIDS or that their chances were very small.
- There was confusion between causality and transmission patterns with most adolescents citing sexual intercourse as both the cause and the primary mode of transmission of the disease;

there was also confusion between AIDS and *Kaliondeonde* (a local STI that produces AIDS-like symptoms), with youth believing that AIDS is untreated *Kaliondeonde*.

- Over half of the respondents agreed that they needed to change their behavior to prevent AIDS; 59% admitted that they have not changed their behavior; 86% feel that they are capable of changing their behavior.
- Fifty-eight percent said they would take the HIV test if they could, and 93% of those who would take the test would want to know their results.
- Fifty-three percent of those who were sexually active had never used a condom; 13% said they would refuse to use a condom if a partner asked them to do so.
- There was interest in and desire for condoms, but participants also mentioned that condoms are ineffective (tear, have holes in them).

Ghana Social Marketing Foundation et al., Ghana youth reproductive health survey report, project report, Ghana Social Marketing Foundation, Planned Parenthood Association of Ghana, Johns Hopkins University, Focus on Youth Project, USAID, 2000.

Geographic Coverage: Ghana.

Methodology and Sample: Interviewer-administered questionnaire to a nationally representative sample of 5,640 male and female youth aged 12-24 years (plus interviews with a nested sample of adults 25 years and older on attitudes about youth reproductive health issues).

Purpose: To examine a wide range of variables that affect adolescent lifestyles and to provide a comprehensive data source for adolescent reproductive health in Ghana.

Main Findings

- About two-thirds of all males and females had their first sexual intercourse between the ages of 15 and 19.
- Fifteen percent of males and 2% of females reported ever paying for sex; 5% of males and 12% of females reported ever being paid for sex.
- Among those who ever had sex, 25% of females and 8% of males reported having been coerced to have sex.

- Awareness of STIs/HIV was high: HIV was the best known STI, with awareness almost universal but some significant misconceptions remaining: Fewer than half knew that someone who looked healthy could have HIV; one in five males and one in six females thought HIV/AIDS was a myth; Fewer than half knew that one could get HIV from blood transfusions; relatively few knew that HIV could be transmitted from mother to fetus and through breastfeeding.
- Youth knew what could be done to protect themselves from contracting HIV: Most youth mentioned the use of the condom (86-97%), and about half mentioned abstinence; most knew symptoms associated with AIDS.
- Youth were more likely to discuss issues of STIs/HIV with romantic partners, a best friend or siblings; the majority of those who had contracted an STI said they had talked to someone about their condition.
- Perceived approval of condoms to prevent HIV and other STIs was 40-50%; most youth who had heard of condoms said they did not have confidence in their ability to use the method correctly.
- Ninety percent of youth did not use condoms every time they had sexual intercourse; fewer than 20% of males and females used a condom at first sex.

Gregson S et al., Sexual mixing patterns and sex-differentials in teenage exposure to HIV infection in rural Zimbabwe, *Lancet*, 2002, 359 (9321):1896-1903.

Geographic Coverage: Manicaland, Zimbabwe.

Methodology and Sample: Interviewer-administered questionnaire to 4,429 young men and women aged 15-24, HIV testing, 20 focus group discussions, in-depth interviews with key informants and participant observation.

Purpose: To investigate the hypothesis that greater exposure to infected sexual partners contributes to the spread of HIV infection in young women.

Main Findings

- Women 15-24 were considerably more likely to be infected than men of the same age; one possible hypothesis was that women have greater exposure to infected sexual partners.

- Young women formed partnerships with men 5-10 years older, whereas young men had relationships with women of a similar age or younger.
- Age at first intercourse and number of sexual partners were the strongest predictors of current infection status; age difference with current partner and having a partner who had other partners was also correlated with infection status.
- Condoms were rarely used in casual relationships, but consistent condom use was more common in casual relationships than in marriage.
- Some young women mentioned pressure from parents to have casual relationships to get money and household necessities.
- Teenage women recognized STIs as a problem in their own age-group, but feared the adverse response they received when seeking treatment at health clinics.
- VCT service providers were not fully equipped to respond to youth issues and needed training.
- Many youth received counseling, but counseling was not universal.
- Most youth intended to adopt safer sexual behaviors after the HIV test.
- Most youth disclosed their HIV test results (to partners or spouses or to peers).
- Fear and lack of confidentiality were factors in preventing youth from getting tested; stigma and cost also prevented youth from getting tested; parents and community were generally not supportive of testing for HIV among young people in Uganda; Kenyan parents had more conflicting views.
- Peers were a primary source of information for identifying HIV testing services.

Horizons, *HIV Voluntary Counseling and Testing Among Youth: Results From an Exploratory Study in Nairobi, Kenya and Kampala and Masaka, Uganda*, Washington, DC: Population Council, 2001.

Geographic Coverage: Nairobi, Kenya; Kampala and Masaka, Uganda.

Methodology and Sample: Interviewer-administered questionnaire to 345 youth in Uganda and to 227 youth in Kenya, focus group discussions and in-depth interviews with youth aged 14-21 (unspecified number), service providers (46 interviews), parents (19 focus groups) and community members (unspecified number).

Purpose: To assess the appropriateness of voluntary counseling and testing (VCT) programs for young people; to identify opportunities and limitations of providing VCT for youth.

Main Findings

- Seventy-seven percent of youth in Kenya and 90% of youth in Uganda reported that they would like to be tested for HIV at some point in the future; youth would be attracted to VCT if services were confidential, honest and inexpensive.
- Many youth who have not had an HIV test said this was because they did not feel at risk of HIV, even though some reported high-risk behaviors.
- Knowledge of safer-sex behavior and reported behavior have little overlap.
- Fundamental barriers to behavioral change lie within teenagers' economic and social context (poverty and low levels of education).
- Males expressed little personal fear of AIDS, a belief in its preventability and a confidence in their ability to be safe.
- Most common sources of information about pregnancy and HIV prevention mentioned were friends, the clinic or doctor and some type of local organization (e.g., Red Cross).
- Condoms were spontaneously mentioned as a way to prevent HIV/STI transmission, and boys (as compared with girls) had more detailed knowledge and descriptions of how to use condoms.

Hulton LA, Cullen R and Wamala Khalokho S, *Perceptions of the risks of sexual activity and their consequences among Ugandan adolescents, Studies in Family Planning*, 2000, 31(1):35-46.

Geographic Coverage: Mbale District, Uganda.

Methodology and Sample: 12 focus groups with 104 youth aged 17-18 (six groups of females and six groups of males).

Purpose: To provide program-related information about adolescent behavior, motivations and perceptions of risk regarding pregnancy and STIs/HIV.

Main Findings

- General concern was expressed that condom use indicates infidelity or having an STI; insistence on condom use could break up a relationship; condom use was considered unacceptable because of perceived reduction in male sensitivity during sexual intercourse; there was also a concern that condoms could possibly have holes or could break.
- The majority of young males did not consider abstinence a realistic preventive option.
- All groups stressed the effects of strong social pressure to have sex.
- Discussions highlighted girls' perception of themselves as having no power within a sexual relationship to implement safer-sex strategies; material resources and forced sex were mentioned only by girls as factors affecting behavior.
- Use of services appeared limited.

Kaaya SF, Leshabari MT and Mbwambo JK, Risk behaviors and vulnerability to HIV infection among Tanzanian youth, *Journal of Health and Population in Developing Countries*, 1998, 1(2):51-60.

Geographic Coverage: Tanzania.

Methodology and Sample: Review of literature on youth and HIV.

Purpose: To describe risk-taking behaviors with a focus on increased vulnerability to HIV infection and the context within which risk-taking takes place.

Main Findings

- Female youth exposed to older partners were more likely to be infected with HIV than women with younger partners; ethos of survival was implied in much of the data reported on sexual activity, particularly females (barmaids, young women at truck stops, commercial sex workers).
- Concerns regarding the sexual behavior of youth may be due to changes in the contexts within which these behaviors occur (modernization) and increased opportunities for young people to indulge in sexual activity (e.g., drinking sessions); new values regarding sexual behavior seem to be linked to material gain and individual decisions.
- Gender-related double standards exist where males are expected to be sexually aggressive, while females are expected to be docile and chaste; it is considered socially acceptable for

males to have multiple sexual partners; girls who are sexually active are seen as behaving badly.

- Decreased relevance of traditional institutions governing "rites of passage" has resulted in a socialization vacuum during adolescence.
- The use of narcotics and alcohol has increased; drug and alcohol use have been closely linked to increased vulnerability to unprotected sexual activity.

Kasule J et al., Zimbabwean teenagers' knowledge of AIDS and other sexually transmitted diseases, *East African Medical Journal*, 1997, 74(2):76-81.

Geographic Coverage: Zimbabwe.

Methodology and Sample: Self-administered questionnaire to 1,689 secondary school girls and boys aged 11-19 (selected from 11 rural and urban schools).

Purpose: To gather data regarding level of knowledge of AIDS and other STIs among Zimbabwean teenagers.

Main Findings

- Seventy-eight percent of students could name at least one STI, but knowledge of symptoms (17%) and consequences of STIs was low (15%).
- Seventy-three percent knew about AIDS; knowledge that HIV cannot be treated was high (83%); misconceptions about modes of transmission (shaking hands, witchcraft, sharing toilets) were common.
- Sources of information on STIs included TV (46%), radio (42%), school (39%) and clinics (29%); preferred sources were TV (20%) and clinics (21%); sources of information on AIDS were mainly teachers (35%), clinics (27%) and mass media (21%).

Kim YM, Marangwanda C and Kols A, Quality of counselling of young clients in Zimbabwe, *East African Medical Journal*, 1997, 74(8):514-518.

Geographic Coverage: Zimbabwe.

Methodology and Sample: Observation by four study teams of 418 consultations at health facilities (hospitals, health centers, family planning clinics, army barrack, youth center) among clients aged 12-24 and interviews with providers.

Purpose: To determine providers' interpersonal communication and counseling skills, client participation and topics discussed.

Main Findings

- Youth aged 15-19 made up about 20% of the clientele; 56% of youth came mainly for family planning services, 20% for antenatal care and 18% for services related to HIV or another STI.
- Confidentiality was a big issue; no clinic had a special waiting area for youth, and counseling could be seen or overheard.
- One-third of providers informed clients that the session was confidential; service providers felt that parents of young unmarried clients should be notified if clients had HIV or another STI.
- Clients confirmed that providers treated them well, but some found providers to be rude and impatient.
- The most common topics of sessions among 12-16-year-olds were STIs and school.
- Clients played a limited role in sessions and did not bring up topics; more than half of 12-16-year-olds appeared shy and embarrassed during counseling sessions.

Kiragu K, Youth and HIV/AIDS: can we avoid catastrophe? Population Reports, Series L, No. 12, 2001.

Geographic Coverage: Worldwide.

Methodology and Sample: Review of existing literature on HIV and youth from 1985 to 2001.

Purpose: To encourage countries to recognize the need for youth to be at the center of strategies to control HIV/AIDS.

Main Findings

- Of the over 60 million people who have been infected with HIV in the past 20 years, about half became infected between the ages of 15 and 24; almost 12 million young people are living with HIV/AIDS; young women are several times more likely than young men to be infected with HIV; in nearly 20 African countries 5% or more of women aged 15-24 are infected; these statistics underscore the urgent need to address HIV/AIDS among youth.

- Reasons cited for why youth are vulnerable to HIV infection include anxiety and embarrassment about sex, peer opinion, lack of information about HIV, other risk-taking behaviors (such as experimenting with alcohol and drugs), poverty and deprivation, social intolerance and discrimination.
- Report presents a combination of various prevention strategies to combat the HIV epidemic: Advocacy; education and communication; access to condoms; voluntary counseling, testing and referral; and improving young people's economic and social conditions.

Konde-Lule JK et al., Adolescents, sexual behaviour and HIV-1 in rural Rakai district, Uganda, AIDS, 1997, 11(6):791-799.

Geographic Coverage: Rakai District, Uganda.

Methodology and Sample: Interviewer-administered questionnaire (including serological data) to 824 adolescents aged 13-19 (baseline survey and two-year follow-up).

Purpose: To present data on HIV infection and related risk behaviors.

Main Findings

- Baseline data from 1990 for adolescents 13-14 indicated that 14% of the young men and 9% of the young women reported having been sexually active in the previous year; 50% of young men and 68% of young women aged 15-19 were sexually active in the previous year.
- At baseline, 9% of adolescent men and 17% of adolescent women reported previous or current potential symptoms of STI; 2% of all young men and 19% of all young women aged 15-19 were HIV-infected.
- Follow-up data from 1992 showed that rates of AIDS-related knowledge increased among adolescents, with over 94% of adolescents aged 13-19 knowing about sexual transmission (at baseline, the proportion was 64% for adolescent men and 82% for adolescent women); the proportion of 15-19-year-olds who reported multiple partners decreased from 22% to 18% among young men and from 13% to 6% among young women; ever-use of condoms increased from 11% to 24% among young men 15-19 and from 4% to 9% among young women 15-19.

Konde-Lule JK, Sewankambo N and Morris M, Adolescent sexual networking and HIV transmission in rural Uganda, *Health Transition Review*, 1997, 7(Suppl.):89-100.

Geographic Coverage: Rakai District, Uganda.

Methodology and Sample: Interviewer-administered questionnaire (including serological HIV testing) to 861 adolescents aged 13-19; data on sexual networking collected among 389 adolescents aged 15-19.

Purpose: To present descriptive information about HIV infection and related behaviors.

Main Findings

- Thirty-six percent reported that they had sexual intercourse in the last 12 months (28% among boys and 42% among girls).
- Six percent had ever used a condom; the main reasons for not using condoms were not knowing about them (23%), trusting a partner (16%) and not liking condoms (11%).
- Fifty percent of females' sexual partners were 20-24 years of age, 18% were 25-29 and 9% were over 30; among males, 96% of the reported partners were in the same age range (15-19); sexual partners of males were mainly students and housemaids, and females' partners were mainly traders and salaried workers; among males, 83% were with partners who were of the same or lower socioeconomic status, and among females, 90% were with partners who were better off economically (data presented in this bullet were for adolescents who provided sexual networking information).
- Overall, 6% of the adolescents were infected with HIV; 1% of the males and 10% of the females were HIV-positive; higher levels of HIV were found among adolescents with one or more sexual partners in the preceding 12 months than among those with no sexual partners in the last 12 months, and among adolescents who reported having one or more genital sores in the past 12 months than among those with none.
- Levels of HIV were 14% among adolescents living in main-road trading centers, 6% in intermediate trading villages and 3% in rural villages; 4% of the unmarried and 16% of the married were HIV-positive.

Leclerc-Madlala S, Infect one, infect all: Zulu youth response to the AIDS epidemic in South Africa, *Medical Anthropology*, 1997, 17(4):363-380.

Geographic Coverage: KwaZulu-Natal, South Africa.

Methodology and Sample: In-depth interviews and mixed group informal discussions with 100 in-school youth aged 18-25.

Purpose: To examine the psychological and social response to AIDS of youth from KwaZulu-Natal.

Main Findings

- Contracting HIV was seen as a new part of growing up and accepted as an almost inevitable consequence of being an adult; the general feeling was that it would be just a matter of time if they were not already infected and they were confident that many of their peers in the community had already contracted the virus anyway.
- Knowing that one is infected with HIV was accepted not only as a death sentence but also as a passport for sexual license; young people expressed a desire to share the burden of disease, and this was believed possible by spreading the virus to others.
- To have a positive diagnosis was said to exacerbate the existing rape crisis; rapists may be targeting young children in a quest to stay clear of HIV infection.
- A particular youth culture has emerged where youth display a strong sense of group destiny, where they will avoid a HIV diagnosis while at the same time seeking to spread the infection to others.

Leclerc-Madlala S, *Youth, HIV/AIDS and the Importance of Sexual Culture and Context*, CSSR Working Paper, Cape Town: Centre for Social Science Research, University of Cape Town, South Africa, 2002, No. 9.

Geographic Coverage: Africa, with a focus on South Africa.

Methodology and Sample: Review and summary of research on youth and HIV in Africa, with particular reference to South Africa and recent findings from ongoing ethnographic research in the Durban periurban settlement of St. Wendolin's.

Purpose: To examine the general body of research on HIV/AIDS and youth and focus on the sociocultural context in which high-risk youth sexual activity takes place.

Main Findings

- Most African studies provide measurable and quantifiable variables, but these are largely decontextualized; most of the research has been quantitative work focusing on variables that contribute to risk-taking; studies consequently ignore complex social interactions and culturally informed norms that influence sexuality and determine the probability of behavior change.
- South African studies tend to be small-scale and location-specific; some are short-term and qualitative; Leclerc-Madlala reviews two national surveys, the loveLife campaign, and other, smaller studies, covering notions of infallibility, sexual behavior, sexual myths, gender-based violence.
- The challenge for future research lies in a more detailed analysis of how various components identified as contributing to the high risk of HIV/AIDS for youth are linked to and maintained by a sociosexual culture/context.

Luke N and Kurz K, *Cross-Generational and Transactional Sexual Relations in Sub-Saharan Africa: Prevalence and Implications for Negotiating Safer Sexual Practices*, Washington, DC: International Center for Research on Women, 2002.

Geographic Coverage: Sub-Saharan Africa.

Methodology and Sample: Review of 45 quantitative and qualitative studies.

Purpose: To assess the extent of sexual relations between adolescent women and older male partners; the extent of transactional sex; the behavioral dynamics of adolescent women and men involved in these sexual relations.

Main Findings

- There is a disparity of HIV infection levels, especially in adolescents; age-mixing is a likely explanation for these differences; age and economic asymmetries, in addition to gender

differences, limit adolescents' power to negotiate safer sex.

- Engaging in sexual relations with older men is the norm for adolescent women.
- Large proportion of girls have been involved in transactional sexual relations in some contexts; as girls mature, they become more likely to exchange sex for money or gifts.
- Greater age differences between adolescent women and partners were associated with increased risk for HIV infection; age differences were linked to nonuse of condoms and nondiscussion of HIV.
- Girls were motivated to find love and eventually a spouse; older men were perceived as more secure economically and more likely to support a girl if she becomes pregnant; financial motivations were the main reason to engage in sexual relations (assist with economic survival, to increase long-term life changes); the pleasure of sexual activity with more experienced partners was also mentioned.
- Girls were found to deceive boys or men by offering "false promises" to delay sexual relations; girls have control over establishing or continuing a relationship, men have greater degree of power within the relationship (little power to discuss safer sex practices or control the use of violence); refusing sex or suggesting condom use jeopardizes goals for the relationship.
- Assertive actions from girls can lead to violence.

MacPhail C and Campbell C, 'I think condoms are good but, aai, I hate those things': condom use among adolescents and young people in a Southern African township, *Social Science and Medicine*, 2001, 52(11):1613-1627.

Geographic Coverage: Khutsong, South Africa.

Methodology and Sample: Eight focus groups with 44 young men and women aged 13-25.

Purpose: To complement existing individual-level quantitative findings highlighting community and social factors that hinder condom use.

Main Findings

- All participants knew about HIV, but there was some confusion about methods of transmission; there were conflicting views about incidence of HIV in the community and the extent to which

participants and other members of the community were vulnerable to HIV; the majority of men externalized the threat of HIV.

- Negative peer norms impeding on consistent use of condoms; female and male participants expressed that condoms should be used in casual encounters but that within steady relationships, trust mitigates against using condoms; young women appeared to feel the effects of peer norms to a lesser degree than their male counterparts; young women made frequent references to relationships in which men would not allow them to use condoms; distinctions were made between partners who require condoms and those who do not; trust was given as the dominant reason for not using condoms.
- The majority of participants indicated that they used free condoms available from the local clinic; for young women, access was more difficult, and the two main barriers were the negative attitudes of nursing staff and social norms that affected the extent to which young women were prepared to carry condoms with them (women doing so were labeled promiscuous).
- Discussion on adult views on sex and condoms indicated that adults preferred to encourage abstinence through punishment and gossip; parental disapproval of youth sex was a reason often given by young men for not using condoms.
- Many young women experienced violence in the course of their sexual relationships that lessened their abilities to either refuse sex or negotiate condom use.
- Poverty was a powerful agent in preventing young people from purchasing condoms; the limited ability of young women to achieve economic independence impacts condom use.

Magnani RJ et al., Reproductive health risk and protective factors among youth in Lusaka, Zambia, *Journal of Adolescent Health*, 2002, 30(1):76-86.

Geographic Coverage: Lusaka, Zambia.

Methodology and Sample: Interviewer-administered questionnaire to 2,328 youth aged 10-24.

Purpose: To identify risk and protective factors for behaviors that expose Zambian youth to risk of HIV infection.

Main Findings

- Greater reproductive health knowledge was associated with higher levels of sexual activity (in contrast with results from other studies); reproductive health knowledge (and knowledge of condoms in particular) was associated with higher probabilities of condom use; findings showed powerful effect of peer behaviors on youth; connectedness with parents or social institutions did not emerge as significant determinants of sexual behaviors.
- Almost all respondents had heard of AIDS; 88% believed that a person can do something to prevent AIDS, with abstinence and condom use being most commonly mentioned; in-depth knowledge about condoms was low; 47% agreed with the statement that condoms should be used during all sexual encounters to avoid infection; 39% of males and 28% of females reported having used a condom at last intercourse; 28% of males and 17% of females reported using a condom “always” or “almost always” with their current or most recent regular partner.
- Most respondents did not think they were at risk of getting HIV/AIDS in the next year.
- Degree of connection with parents was low.
- Higher levels of education and school attendance were protective factors across the three outcomes on sexual behaviors (ever had sex, number of lifetime partners, had more than one partner in last three months).

Mahy M and Gupta N, *Trends and Differentials in Adolescent Reproductive Behavior in Sub-Saharan Africa, DHS Analytical Studies*, Calverton, MD, USA: ORC Macro, 2002, No. 3.

Geographic Coverage: Burkina Faso, Côte d'Ivoire, Ghana, Kenya, Mali, Senegal, Tanzania and Zimbabwe.

Methodology and Sample: Data from Demographic and Health Surveys among females aged 15-24 and males aged 15-29.

Purpose: To present a comparative perspective on correlates of and trends in the timing of sexual activity, union formation and childbearing during adolescence.

Main Findings

- Between surveys in Côte d'Ivoire, Ghana and Senegal, there was a significant reduction in the proportion of women who had sex before age 18; among young men, Zimbabwe was the only country that showed a significant change in probability of sex before age 18 between two surveys.
- Awareness of AIDS was widespread, methods of AIDS prevention were less well known: knowledge of condoms as a barrier method was highest in Côte d'Ivoire and Zimbabwe, where about half of young women and two-thirds of young men reported knowledge; ways to avoid HIV/AIDS (abstaining from sex, limiting sex to one faithful partner, avoiding multiple partners and avoiding prostitutes) were reported by at least 60% of young women in Côte d'Ivoire, Ghana and Zimbabwe, and by at least 60% of young men in Senegal and Zimbabwe.
- Misconceptions about HIV/AIDS transmission were common: Fewer than half of the young women in Burkina Faso, Mali and Senegal indicated correct knowledge of ways to prevent HIV/AIDS.

Maswanya ES et al., Knowledge, risk perception of AIDS and reported sexual behaviour among students in secondary schools and colleges in Tanzania, *Health Education Research*, 1999, 14(2):185-196.

Geographic Coverage: Dar-es-Salaam, Tanzania.

Methodology and Sample: Self-administered questionnaire to 1,041 secondary and college students aged 16-24.

Purpose: To evaluate the relationship between risky sexual behavior and anticondom bias, AIDS-related information, knowledge, perceptions and attitudes.

Main Findings

- Most students got information on HIV/AIDS from the mass media, religious leaders, health professionals, teachers, friends and parents; 76% had heard something about AIDS; 86% knew at least one person who had died of AIDS, and 58% knew someone with AIDS at the time of the survey; 68% knew that people who are HIV-positive can appear healthy; 88% were aware that

having multiple partners increased the risk of HIV/AIDS; 40% wanted AIDS education taught in school; 99% thought AIDS is a very dangerous disease; 85% knew that AIDS could not be cured even if detected early; 25% of students felt personally at risk of acquiring HIV; 66% were prepared to take an AIDS test.

- Seventy percent of students achieved a "good score" (defined as correctly responding to 13 or more of the 15 questions) for HIV transmission and prevention; condom use as a preventive measure had the lowest correct answer rate (77%); many students believed that condoms reduce the sensation of romantic sex (66%), that condoms are not safe (51%), that condoms can bring disease (48%) and that their sexual partner hates condoms (37%).
- Fifty-four percent of the students were sexually active; 39% had a regular sexual partner at the time of the study and 13% had multiple partners in the previous year.
- Forty-six percent of the sexually active students answered that they always use condoms during sex.

Meekers D, Ahmed G and Molatlhegi MT, Understanding constraints to adolescent condom procurement: the case of urban Botswana, *AIDS Care*, 2001, 13(3):297-302.

Geographic Coverage: Lobatse and Francistown, Botswana.

Methodology and Sample: Eight focus groups with in-and out-of-school youth aged 14-20.

Purpose: To illustrate why adolescents who want to use condoms may not always be willing or able to do so and to explore to what extent adolescents' perceptions of ease of access differs for public-and private-sector outlets.

Main Findings

- Over 90% of males and females aged 13-18 reported ever having used a condom; 67% of females and 79% of males reported using a condom at last sex with a regular partner; 80% of females and 82% of males reported using a condom at last sex with a casual partner.
- Fifty-one percent of females and 56% of males have ever obtained condoms from a health facility, even though condoms are free; retail

outlets were the most common source for condoms; friends, peers and siblings were an important source for males but not females (34% vs. 3%).

- Many adolescents felt uncomfortable getting condoms because they did not want to disclose that they were sexually active and they feared being stigmatized.
- Poor relationships with providers deterred youth from obtaining condoms; most adolescents noted that public sector providers were unfriendly and questioned the behavior of adolescents; private providers were perceived as indifferent and more willing to provide services to adolescents; males remarked that it was better to obtain condoms from friends than from clinics or other providers because it was less embarrassing; girls rarely got condoms from friends.
- Some adolescents had concerns about the quality of free condoms.

Meekers D and Calvès AE, "Main" girlfriends, girlfriends, marriage, and money: the social context of HIV risk behaviour in Sub-Saharan Africa, *Health Transition Review*, 1997, 7(Suppl.): 361-375.

Geographic Coverage: Yaoundé, Cameroon.

Methodology and Sample: Focus group discussions (number not specified) among males and females aged 17-25.

Purpose: To examine premarital sexual relationships, the motivation for engaging in such relationships and the marriage prospects of these types of relationships.

Main Findings

- Premarital sexual relationships have become the norm in urban Cameroon.
- It is not uncommon for young men to have more than one girlfriend simultaneously (and to a lesser extent, the same is true for young women); the "main" girlfriend or boyfriend is distinguished from other partners as the preferred one, the one that is loved and trusted most; other relationships are often conducted secretly and can be broken easily.
- It is not socially acceptable for young people to remain abstinent for a prolonged period of time.

- Many respondents commented on the economic aspects of relationships: For women, relationships with older men were valued because of economic benefits and also because they provide greater emotional stability; men may also have economic motives for engaging in a sexual relationship (if they are unemployed or have poorly paid jobs) and may use relationships for networking purposes.
- Different types of relationships are intended to achieve different objectives, including sexual experience and satisfaction, marriage or economic security.

Meekers D, Klein M and Foyet L, Patterns of HIV risk behavior and condom use among youth in Yaoundé and Douala, Cameroon, Working Paper, Washington, DC: Population Services International, 2001, No. 46.

Geographic Coverage: Yaoundé and Douala, Cameroon.

Methodology and Sample: Interviewer-administered questionnaire to 1,956 unmarried youth aged 15-24.

Purpose: To describe the levels of sexual risk behavior and condom use among youth in Cameroon.

Main Findings

- Sixteen percent of females and 29% of males aged 15-24 reported having sexual relations by age 15; the proportion varied by level of education and school status for females.
- Eleven percent of all females and 20% of all males reported having two or more regular partners in the past year; two or more casual partners were reported by 3% of the females and 17% of the males.
- Seventy-seven percent of sexually experienced females and 78% of sexually experienced males reported ever having used a condom; 14% of females and 20% of males reported always using condoms with their regular partners.
- Despite increasing awareness of HIV, youth in Cameroon engaged in risky sexual behavior.

Meyer-Weitz A et al., The determinants of health care seeking behaviour of adolescents attending STD clinics in South Africa, *Journal of Adolescence*, 2000, 23(6):741-752.

Geographic Coverage: Cape Town, South Africa.

Methodology and Sample: Interviewer-administered questionnaire to 292 patients aged 20 or younger seeking health care at STI clinics.

Purpose: To investigate the determinants of delay behavior in seeking health care.

Main Findings

- Fifty-six percent of patients sought health care from the clinic fewer than seven days after noticing symptoms; 23% took 7-10 days; 21% waited more than 10 days.
- Patients generally had a good knowledge about STIs in terms of their cause, consequences and transmission.
- Most adolescent patients held supportive beliefs and positive attitudes toward seeking health care.
- Adolescent patients felt that good friends and partners would support them in their seeking care for STI symptoms.
- Help-seeking was not hampered by practical barriers or by perceptions of embarrassment.
- Fourteen percent indicated that they had treated their STI symptoms prior to seeking health care (by washing their genitals with disinfectants, or using laxatives or traditional medicine).
- Three variables were found to predict delay in seeking health care: Self-treatment, attitudes towards personal autonomy in condom use and perceived need to seek help for STI symptoms.

Muyinda H et al., Traditional sex counselling and STI/HIV prevention among young women in rural Uganda, *Culture, Health & Sexuality*, 2001, 3(3):353-361.

Geographic Coverage: Masaka District, Uganda.

Methodology and Sample: 132 individual in-depth interviews, nine focus groups, simulation games with adolescent women aged 13-19 (also collected data on adult women and community opinion leaders).

Purpose: To study the potential of traditional ways of passing on sexual knowledge from adult to younger women as a potential tool for STI/HIV prevention.

Main Findings

- The *senga* institution (ways of passing on sexual knowledge from adult to younger women) still exists, but has been weakened; the sex education it provides is still traditional in nature; ideal cultural values such as virginity before marriage and labia elongation are still discussed, but risk practices for HIV are not.
- A need for community-based sex counseling was voiced by both adult and young women.
- Most girls underestimated their own vulnerability to becoming infected with HIV, while some believed that only strangers could transmit HIV to them, not men they knew.
- Many girls were fatalistic and felt that any effort to change their behavior would be a waste of time; there was a general belief that AIDS had come to stay and would not go away during their lifetime; numerous common sayings conveyed fatalistic beliefs about STIs/HIV and were felt to encourage risky behavior.
- Distrust of condoms was the main hindrance to their use; many girls did not understand how condoms could prevent STI/HIV transmission.

Mwakagile D et al., Sexual behaviour among youths at high risk for HIV-1 infection in Dar es Salaam, Tanzania, *Sexually Transmitted Infections*, 2001, 77(4):255-259.

Geographic Coverage: Dar-es-Salaam, Tanzania.

Methodology and Sample: Interviewer-administered questionnaire and testing for syphilis and HIV-1 to 398 youth aged 24 and younger visiting a clinic for sexual and reproductive health.

Purpose: To gather information on the sexual behavior of youth.

Main Findings

- Twenty-five percent of females and 30% of males reported sex below the age of 16; among those who were sexually experienced, 50% of males and 14% of females had had more than five lifetime sexual partners; males reported that their

partners were younger with a mean of 0.7 years whereas females reported their male partners to be older with a mean of 5.3 years.

- Thirty percent of the males and 40% of the females never used a contraceptive method; 69% of males and 60% of females had ever used condoms for STI prevention; 69% of males and 37% of females used condoms for contraception.
- Twenty-five percent of females and 6% of males were HIV-positive; 15% of female adolescents and no males (younger than 20) were HIV-positive; 14% of females with one lifetime partner were HIV-infected compared with 41% with more than five partners.

Nare C, Katz K and Tolley E, Adolescents' access to reproductive health and family planning services in Dakar, Senegal, *African Journal of Reproductive Health*, 1997, 1(2):15-25.

Geographic Coverage: Dakar and Pikine, Senegal.

Methodology and Sample: Interviewer-administered questionnaire to 1,973 women and 936 men aged 15-24, 26 mystery client visits and two focus group discussions among 16-20-year-olds.

Purpose: To report on results from an investigation of teenage access to family planning services and reproductive health information.

Main Findings

- Main reasons cited as barriers to obtaining contraceptive methods were marital status for women, embarrassment, expense of method and likelihood of bad reception by clinic staff.
- Clients were disappointed by providers' reception, response to their needs and refusal to give out contraception, and considered content of counseling by providers moralistic.
- Providers did not receive young adults well; first contact with clinics was negative.
- Focus group participants seemed well aware of the risks of contracting STIs; there were widespread misconceptions about which methods are most effective in preventing STIs; there was a general lack of concern about STIs/AIDS (perhaps due to greater fear of pregnancy).
- There was agreement that girls should wait until marriage to initiate sexual activity, but indication that this does not always happen.

Nwokocho ARC and Nwakoby BAN, Knowledge, attitude, and behavior of secondary (high) school students concerning HIV/AIDS in Enugu, Nigeria, in the year 2000, *Journal of Pediatric Adolescent Gynecology*, 2002, 15(2):93-96.

Geographic Coverage: Enugu, Nigeria.

Methodology and Sample: Self-administered questionnaire administered to 360 students in five secondary high schools.

Purpose: To investigate the knowledge, attitude and behavior of students concerning HIV/AIDS.

Main Findings

- Students had been exposed to information concerning HIV/AIDS, but had inaccurate understanding of HIV; most students were aware of the disease and afraid of it, but not sure of the cause, nature or modes of transmission and prevention; 69% of respondents said that the use of condoms can lower the risk of getting AIDS; 89% reported being afraid of getting AIDS.
- Media were cited as the major source of information on HIV/AIDS.

Nzioka C, Dealing with the risks of unwanted pregnancy and sexually transmitted infections among adolescents: some experiences from Kenya, *African Journal of Reproductive Health*, 2001 (a), 5(3):132-149.

Geographic Coverage: Makeni District, Kenya.

Methodology and Sample: Sixteen focus group discussions with 184 secondary school students aged 15-19.

Purpose: To explore the extent to which adolescent females and males perceive the dual risks of unwanted pregnancy and STIs, including HIV, and the strategies they use to prevent or cope with them.

Main Findings

- Adolescents were quite aware of risk and protective behaviors, but they face obstacles in translating this knowledge into safer behaviors (misinformation, reticence about communication, reluctant to seek condoms in public places, difficulties negotiating safer sex).

- Adolescents expressed greater concern about unwanted pregnancy than about STIs.
- Adolescents reported negative images of women who had premarital sex; premarital sex was not openly approved for boys, but it was not condemned as it was for girls.
- A number of factors (peer pressure, feelings, poverty, gender power relations and use of drugs) contribute to unprotected sexual intercourse, even when risks of pregnancy and STIs are well known.
- Instead of confronting partners, girls reported using avoidance and deception as strategies to prevent a sexual encounter.
- Withdrawal and periodic abstinence were frequently cited as ways to prevent pregnancy; these methods were viewed as ineffective; adolescents lacked precise information on what constitutes the safe period.
- For females, contracting STIs was seen as a sign of promiscuity, irresponsibility or immorality, but for men as a sign of masculinity and not shame.
- Even though aware of consequences of HIV, participants reported a kind of fatalism and inability to engage in safer sex.
- Condoms and other sexual and reproductive health services were inaccessible and unaffordable for most youth.
- Adolescents appeared more confident in their ability to control unwanted pregnancy than infection.
- Condom use by males was seen as prudent and responsible, girls were seen as prostitutes if they suggested using condoms.

Nzioka C, Perspectives of adolescent boys on the risks of unwanted pregnancy and sexually transmitted infections: Kenya, *Reproductive Health Matters*, 2001 (b), 9(17):108-117.

Geographic Coverage: Makeni District, Kenya.

Methodology and Sample: Eight focus group discussions with 90 male secondary school students aged 15-19.

Purpose: To explore the perspectives of adolescent boys on the risks of unwanted pregnancy and STIs/HIV.

Main Findings

- A large proportion of adolescent boys were sexually active; sexual experience was perceived as an integral part of initiation into manhood; boys appeared enthusiastic to report their sexual experiences; most reported having had multiple sexual partners.
- Adolescent boys recognized the pressure of adult norms in favor of sexual abstinence and peer norms that encourage premarital sex.
- With the exception of HIV/AIDS, contracting curable STIs seemed acceptable to some of the boys as a way of gaining experience; most boys appeared particularly scared of contracting HIV; boys argued that they had unprotected sex only with young females and that they did not flirt with “loose girls”; other boys said that they avoided HIV infection by avoiding thin and sickly looking girls, by taking a shower after ejaculation and by not having sex with prostitutes.
- Knowledge that condom use prevents pregnancies and STIs was universal; condoms carried a host of negative meanings (e.g., perceived ineffectiveness); local health facilities where condoms could be accessed were well known, but boys remained inhibited from accessing and using condoms largely because of embarrassment or shame; boys reported that they were unwilling to use free condoms and reluctant to buy cheap ones, arguing that these were likely to be of very low quality.

Oladapo MM and Brieger WR, Reproductive knowledge, attitudes and behaviour of secondary school students in Akure, Nigeria, *International Quarterly of Community Health Education*, 1996-1997, 16(4):341-358.

Geographic Coverage: Akure, Nigeria.

Methodology and Sample: Self-administered questionnaire to 380 students aged 11-21.

Purpose: To learn whether adolescents in secondary school have reproductive health education and are practicing healthy sexual behaviors.

Main Findings

- Thirty percent had ever had sex; 37% of those who ever had sex used something to protect

themselves during their first sexual intercourse, with condoms being the most common response.

- Among those currently sexually active, main reason for using condoms was to prevent pregnancy, followed by STI prevention.
- Most respondents had heard of AIDS (92%); 77% correctly answered that HIV/AIDS can be transmitted by having sex with an infected person, 45% said through blood transfusion from a hospital that does not test blood and 38% by taking injections from quack doctors; some incorrectly believed that AIDS could be spread by sharing cups with an infected person (29%), breathing the air when an infected person coughs (22%) and shaking hands with an infected person (12%).
- In terms of prevention, students mentioned avoiding promiscuity (51%) and using condoms (50%); incorrect options given were not eating with an infected person (30%), going to the hospital for a protective injection (25%) and washing hands before eating (15%).
- The most common sources of information about STIs and AIDS were television; respondents felt most comfortable talking to health workers about sexual problems and prevention of pregnancy.
- Twelve percent of the respondents said they could be infected with AIDS; 40% of the respondents who reported that they could be infected with AIDS said so because they had sexual intercourse; among those who said they were not at risk, reasons cited included that they did not have a boyfriend or girlfriend or abstained from sex (44%), had only one sexual partner (11%), used unspecified protection (8%) or used condoms (3%).

Population Reference Bureau, *Youth in Sub-Saharan Africa: A Chartbook on Sexual Experience and Reproductive Health*, Washington, DC: Population Reference Bureau, 2001.

Geographic Coverage: Sub-Saharan Africa (countries included are Côte d'Ivoire, Ghana, Kenya, Madagascar, Mali, Mozambique, Senegal, Tanzania, Uganda, Zambia and Zimbabwe).

Methodology and Sample: Demographic and Health Survey data for 1987-1998, with a focus on adolescents aged 15-19.

Purpose: To provide decision makers with a better understanding of the experiences and needs of adolescents in the region (focusing on education and exposure to information, sexual experience and marriage, HIV/AIDS, childbearing, and maternal health); and to provide a list of key implications for policies and programs.

Main Findings (results from HIV/AIDS chapter)

- In the majority of countries surveyed (where HIV prevalence levels tend to be high among young people), over half of adolescents believed that they had little or no risk of getting AIDS; young men were more likely than young women to believe themselves at low or no risk of getting HIV/AIDS (main reasons included only having one partner, abstaining from sex, using condoms).
- HIV infection levels were often higher among teenage women than among teenage men; by age 30, male prevalence levels exceeded levels found among women.
- One of the reasons for higher infection levels among young women was that their partners were likely to be older and more sexually experienced; other reasons included biological susceptibility, economic disparities and gender norms.
- The majority of adolescents were aware of HIV/AIDS, but fewer knew of at least one way to prevent sexual transmission of HIV; more young men than young women knew how to prevent HIV/AIDS.
- Young men were more likely than young women to report condom use.

Pratt CB et al., *Health-information sources for Kenyan adolescents: implications for continuing HIV/AIDS control and prevention in Sub-Saharan Africa, Western Journal of Black Studies, 2000, 24(3):131-144.*

Geographic Coverage: Mombasa, Kenya.

Methodology and Sample: Interviewer-administered questionnaire to 351 youth aged 15-19 and six focus groups with 48 participants.

Purpose: To examine sociocultural factors that underlie sexual practices and STIs in sub-Saharan Africa; to explore sources of information on health or health-related problems and on contraceptives that youth can use to prevent STIs and pregnancy.

Main Findings

- HIV/AIDS was ranked as the most serious health problem (22%), followed by malaria, dysentery and hygiene; alcoholism and drug use were also mentioned.
- Hospitals, clinics and the Ministry of Health (28%) were the most frequently cited sources of information on contraceptives; mass media were the second most important source of information; other sources were schools and teachers (17%) and parents (11%).
- Awareness of condoms was reported by 20% of respondents.
- Teenagers in the study did not attach much importance to taking measures to protect themselves from HIV/AIDS.

Rutenberg N et al., Pregnant or Positive: Adolescent Childbearing and HIV Risk in South Africa, Policy Research Division Working Paper, New York: The Population Council, 2001 (a), No. 162.

Geographic Coverage: KwaZulu-Natal, South Africa.

Methodology and Sample: Interviewer-administered questionnaire to 1,426 respondents aged 14-22 (subsample of Transitions to Adulthood in the Context of AIDS in South Africa longitudinal study).

Purpose: To examine the relationship between preferences for childbearing among adolescents and the extent to which HIV is perceived as a risk in their lives and environment.

Main Findings

- Among sexually active boys, age, race, wealth and the proportion of adults who think that young people in their community are at risk of acquiring HIV were significant predictors that a pregnancy in the near future would be a problem.
- Race and relationship status were important predictors of preferences in pregnancy timing for girls; those from communities where many adolescents were in school were significantly more likely to state that pregnancy would be problematic than those who were from communities where school enrollment was low

- In communities where most peers perceived a high level of risk for HIV, girls were more likely to feel that becoming pregnant in the near future would be problematic.

Rutenberg N et al., *Transitions to Adulthood in the Context of AIDS in South Africa: Report of Wave I*, New York: The Population Council, 2001 (b).

Geographic Coverage: KwaZulu-Natal, South Africa.

Methodology and Sample: Interviewer-administered questionnaire to 3,096 respondents aged 14-22.

Purpose: To describe the context of adolescence, including education and employment, reproductive and sexual health knowledge and events, and the coverage of the Life Skills Programme.

Main Findings

- Ninety-five percent reported that a person can do something to avoid HIV; 90% mentioned condoms as a means of protection, 33% abstinence, 10% having only one partner and 7% use of sterilized needles.
- One out of four youth said they knew someone who died of AIDS.
- One-third of respondents reported that they did not feel comfortable sharing a bed, or sharing food and utensils with someone who is infected or whom they suspect is infected with HIV; 25% said that HIV-positive students should not be allowed in schools.
- Eleven percent of respondents thought they were at moderate or great risk of HIV; main reasons given by those who felt they were at low or no risk were that they were not sexually active, always used condoms or had only one partner.
- Eleven percent of respondents had had an HIV test, and 80% had received the results.
- Knowledge of STIs other than HIV was low.
- Knowledge of a source of condoms was nearly universal; support for condoms was widespread (in contrast to results from past studies); greatest ambivalence was about whether condoms reduce sexual pleasure.

- Among those with STIs in the last 12 months, 50% informed partner, 50% stopped having sex, 33% said they used condoms; the majority sought advice or medicine, but fewer than half received a diagnosis; 19% sought advice from traditional healer.

Rwenge M, Sexual risk behaviors among young people in Bamenda, Cameroon, *International Family Planning Perspectives*, 2000, 26(3):118-123.

Geographic Coverage: Bamenda, Cameroon.

Methodology and Sample: Interviewer-administered questionnaire to 671 youth aged 12-25.

Purpose: To examine sexual risk behaviors that expose young people to a greater risk of HIV infection.

Main Findings

- Ninety-seven percent of youth had heard of AIDS; half of respondents had gotten information about AIDS from the radio or television, smaller proportions had heard about AIDS from friends (17%), school (17%), newspapers (14%), health centers (9%) or family (9%).
- Ninety-four percent of young people identified sexual intercourse as a way of HIV transmission, 51% contact with infected blood, and 39% sharing needles; 14% knew about maternal transmission.
- The most commonly mentioned methods to prevent AIDS were use of condoms (89%), abstinence (24%) and fidelity (15%).
- The main measures that young people had taken to prevent AIDS were abstaining from sex (64%), being faithful to one partner (55%), using condoms with casual partners (19%) and limiting the number of partners (13%).
- Twenty-five percent of the people who were sexually active at the time of the survey were using condoms.
- Thirty-seven percent of females and 30% of males said that their first sexual experience had not been voluntary.
- Family composition and household standard of living were the factors most consistently associated with sexual risk behaviors: Those living in a poor household were more likely to be

sexually active and more likely to have had casual sex in the previous year than those living in a household with a high standard of living; young people living with one parent were more likely to be sexually active, to have multiple concurrent partners, to have had casual sex in the previous year and to not be using condoms than those in two-parent households.

- Living with grandparents had a protective effect, while living with a sibling, alone or with other persons, generally increased the likelihood of engaging in sexual risk behaviors.

Singh S, Darroch JE and Bankole A, The role of behavior change in the decline in HIV prevalence in Uganda, New York: The Alan Guttmacher Institute, 2002.

Geographic Coverage: Uganda.

Methodology and Sample: Analysis of Demographic and Health Surveys from 1988, 1995 and 2000 for women aged 15-49, and from 1995 and 2000 for men aged 15-49 (with a focus on 15-24-year-old men and women).

Purpose: To assess the relative contributions of sexual abstinence, multiple partner reduction and condom use in reducing HIV prevalence rates in Uganda.

Main Findings

- Delay in initiation of sexual activity was a moderately important factor in the reduction in risk of HIV infection; age at initiation of sexual intercourse has increased for young men and women; the proportion of young women and young men who have ever had sex has decreased.
- Abstinence among those who have ever been sexually active was not a significant factor.
- Increased monogamy, especially among unmarried women, was a significant factor for the period 1995-2000.
- Increased use of the condom among the unmarried sexually active population, for both men and women, was a significant factor.

Stanton BF et al., HIV risk behaviors, intentions and perceptions among Namibian youth as assessed by a theory-based questionnaire, *AIDS Education and Prevention*, 1999, 11(2):132-149.

Geographic Coverage: Omusati and Caprivi, Namibia.

Methodology and Sample: Self-administered questionnaire to 922 youth aged 12-18 living in school-based hostels.

Purpose: To report on the first phase of an AIDS risk reduction program and to address three questions: 1) Can risk assessment questionnaires developed in Western countries be modified and used in African countries? 2) Are social cognitive models appropriate in African settings? 3) Does covariation among risk behaviors occur among youth in African countries?

Main Findings

- Thirty-seven percent of youth reported ever having engaged in sexual intercourse, 70% of whom engaged in sex in the last six months; 33% of youth had had more than one sexual partner, and 10% had had two or more partners; 50% of sexually experienced youth reported having used a condom at last intercourse.
- Thirty-three percent or more responded incorrectly to nearly half of the questions about HIV (e.g., taking birth control pills is one way to protect yourself from becoming infected with HIV).
- The majority of youth perceived themselves as invulnerable to STIs and AIDS.
- A significantly greater proportion of youth who had used condoms thought that most of their friends used condoms than youth who had not used them; a significantly greater proportion of youth who used condoms than nonusers believed that it was acceptable for girls to carry condoms and that boys who used them were responsible; condom users were more likely than youth who had not used a condom at last intercourse to perceive themselves as efficacious regarding access to condoms, ability to make a partner use a condom, and ability to ask for condoms in a pharmacy.

St. Lawrence JS et al., Cross-cultural comparison of US and Nigerian adolescents' HIV-related knowledge, attitudes, and risk behaviour: implications for risk reduction interventions, *AIDS Care*, 1995, 7(4):449-461.

Geographic Coverage: Nigeria (location not specified) and United States (urban area in Southeast and Mid-Atlantic regions).

Methodology and Sample: Self-administered questionnaire to 511 students aged 13-19.

Purpose: To assess similarities and differences between adolescents in Nigeria and the United States on attitudes toward AIDS prevention, AIDS-related knowledge and sexual behavior.

Main Findings

- U.S. adolescents were more knowledgeable about HIV transmission, had more favorable attitudes toward prevention and condoms, and had greater confidence that condoms would be effective in preventing HIV infection than Nigerian adolescents.
- U.S. adolescents reported more lifetime sex partners, engaged in higher frequencies of unprotected vaginal intercourse, became sexually active at a later age and were more likely to use a condom during anal intercourse than their Nigerian counterparts.
- There were no significant differences between groups in perceived risk for HIV infection, frequency of unprotected anal intercourse and proportion of vaginal intercourse occasions that were condom-protected.

Swart-Kruger J and Richter LM, AIDS-related knowledge, attitudes and behaviour among South African street youth: reflections on power, sexuality, and the autonomous self, *Social Science and Medicine*, 1997, 45(6):957-966.

Geographic Coverage: South Africa (eight cities).

Methodology and Sample: Fourteen focus group discussions with 141 male street youth aged 11-18 (recruited through South African nongovernmental organizations that provide food, shelter, education and other services to street children and youth).

Purpose: To ascertain AIDS-related knowledge, attitudes and behavior of street youth in South Africa.

Main Findings

- Knowledge of HIV/AIDS was relatively good, but some aspects of knowledge were problematic: Vulnerability to AIDS was attributed to casual sex and sex with particular groups of people, and not to unprotected penetrative sex; AIDS was perceived as a moral issue; AIDS was inappropriately associated with appearance.
- Perceptions of people at high risk to get HIV had a moralistic foundation.
- Attitudes toward people with AIDS demonstrated intolerance and anger.
- Participants' efforts to protect themselves from being infected had no urgency for them: No one spontaneously included AIDS or HIV as a priority.
- Participants viewed selling sex as the best way to get money on the streets; rape as a constant threat and sex as necessary for survival.
- Ninety-three percent accepted condoms as an effective means of HIV prevention, but all of the young men expressed negative attitudes toward condoms, and none regularly used them.
- Half of the young men tested had been told their results; having been tested for HIV made no difference to their attitudes or behavior.

Temin MJ et al., Perceptions of sexual behavior and knowledge about sexually transmitted diseases among adolescents in Benin City, Nigeria, *International Family Planning Perspectives*, 1999, 25(4):186-190 & 195.

Geographic Coverage: Benin City, Nigeria.

Methodology and Sample: Twenty-four focus groups among secondary school students aged 15-20.

Purpose: To provide deeper insight into adolescents' perceptions, knowledge and experience regarding STI acquisition, symptoms, prevention and treatment.

Main Findings

- Sexual activity was common among students; monetary gain was the most common reason cited for sexual relationships, and peer pressure was also frequently mentioned; material or monetary gain, satisfaction and variety were reasons given for why respondents engaged in sex with strangers and multiple partners.

- In discussing risks of having sex with multiple partners and strangers, many respondents reported feeling a sense of vulnerability to STIs and AIDS.
- Overall, respondents had some knowledge about STIs, but there was disagreement about the symptoms and causes of STIs; respondents had more knowledge about HIV than about other STIs; a few respondents knew that AIDS was transmitted through blood-to-blood contact; some reported that AIDS can be transmitted through sex and injections, but others incorrectly mentioned that infection can occur from mosquito bites or toilets.
- For those who told someone about their STI symptoms, telling friends was the most common choice; about half of the participants stated that people with STIs usually did not tell anyone about the condition; very few told their sexual partners.
- Most adolescents with STIs sought treatment from traditional healers, followed by patent medicine dealers, private doctors and hospitals, and some mentioned self-treatment; advantages of traditional healers were low cost and speed of delivery and cure, lack of privacy in hospitals, fear about how hospital staff treat young people.
- Participants agreed that condoms were the best method of STI prevention; the next method thought to be most commonly used was abstinence, followed by monogamy and then antibiotics.
- Condom use reported by participants was low; students thought that condoms decrease enjoyment, fear that quality of condoms is low and believe that condom use communicates mistrust.
- The most common sources of STI information tended to be newspapers, magazines and posters, followed by radio, television and film; male students said that friends and peers were their most common sources of information; students viewed using electronic media as the most effective way to transmit information on STIs to young people.

Tengia-Kessy A, Msamanga GI and Moshiro CS, Assessment of behavioural risk factors associated with HIV infection among youth in Moshi Rural District, Tanzania, *East African Medical Journal*, 1998, 75(9):528-532.

Geographic Coverage: Moshi Rural District, Tanzania.

Methodology and Sample: Interviewer-administered questionnaire to 1,104 youth aged 15-24 and HIV testing among 1,003 youth.

Purpose: To determine behavioral risk factors associated with HIV seropositivity.

Main Findings

- Seventy percent of youth have had sexual intercourse; 25% of sexually experienced youth had their first sexual experience before the age of 15; 50% of sexually experienced females reported having received a gift for their sexual encounter.
- HIV seropositivity was 10% among females and 5% among males.
- Among males, cigarette smoking, ever-use of marijuana and having a history of STIs were significant risk factors associated with increased risk of HIV seropositivity; among females, history of STIs, having had four or more lifetime sexual partners and having ever practiced oral sex were significant risk factors associated with increased risk of HIV seropositivity.

Toroitich-Ruto C, The determinants of teenage sexuality and their understanding of STDs/HIV/AIDS in Kenya, *African Population Studies*, 1997, 12(2):39-50.

Geographic Coverage: Seventeen districts, Kenya.

Methodology and Sample: Self-administered questionnaire to 9,208 in-school, never-married men and women aged 15-24.

Purpose: To examine the factors influencing adolescents' sexual behavior and their knowledge and perceptions of the risk of contracting STIs/HIV/AIDS.

Main Findings

- Six percent of respondents reported that AIDS was curable, and 4% did not know.

- Thirty-five percent of adolescents answered correctly that condoms prevent AIDS infection (35% said that they did not prevent AIDS infection).
- Among those respondents who had seen an AIDS patient, 20% said they could get AIDS through kissing and 21% through mosquito bites.
- Forty-eight percent of all respondents said that teenagers were safe from being infected with AIDS.
- Fifty-three percent ever used a condom.
- Factors that influenced the onset of sexual activity were age, religion, type of residence, education and career expectations, type of school attended, performance in school, parents' marital status and correct knowledge of the ovulatory cycle.

UNFPA, PATH and PATHFINDER, African Youth Alliance Uganda baseline survey report on adolescent sexual and reproductive health, African Youth Alliance Uganda, 2002 (a).

Geographic Coverage: 20 districts, Uganda.

Methodology and Sample: Interviewer-administered questionnaire to youth aged 10-24; focus group discussions and key informant interviews (numbers not specified); collected data from health facilities and educational institutions.

Purpose: To generate data to gauge the progress of the African Youth Alliance interventions.

Main Findings

- Most adolescents had had their first sexual intercourse with partners of similar age; however, females were more likely to have older partners.
- About 80% of males and 62% of females reported that they had wanted to have sexual intercourse the first time they had sex; female adolescents (22%) were more likely to have their first intercourse in marriage than male adolescents (6%).
- Ten percent of females reported that they had been coerced into their first intercourse; 14% of females and males had ever engaged in sex for gain; the most common form of reward was money.
- Forty-four percent of males and 40% of females ever used the condom; males were less likely to use condoms with a regular partner (58%) than females (74%); males (87%) were more likely to

initiate condom use than females (58%); overall, perception of condom use was positive.

- More than 80% had ever heard of HIV/AIDS and most respondents knew that a healthy-looking person can have HIV.
- About a quarter of the respondents perceived themselves to be at risk of contracting HIV/AIDS; the most common reason given for this perception was the practice of unsafe sex followed by having multiple partners.
- Twelve percent of males and females have ever been tested for HIV; about 75% of the respondents were willing to take the HIV test; hospitals were the most cited source for HIV testing.
- Of those who had experienced an STI symptom, nearly half did not tell their sexual partners about their STI symptom.
- Forty-eight percent of males and 55% of females reported that adolescent sexual and reproductive health services were easily accessible to them; for those who did not consider such services accessible, inconvenient location, cost of services and disapproval of parents or provider were cited as major barriers to accessing services.

UNFPA, PATH and PATHFINDER, Baseline study on knowledge, attitudes, behaviors and practices of adolescents and youth on sexual and reproductive health, African Youth Alliance Botswana, 2002 (b).

Geographic Coverage: Botswana.

Methodology and Sample: Interviewer-administered questionnaire to 3,900 youth aged 10-24 and 428 adults; 30 focus group discussions with youth and eight with adults.

Purpose: To obtain baseline data on reproductive health and, particularly, HIV/AIDS in adolescents.

Main Findings

- All respondents aged 15-24, and 90% for those aged 10-14, had heard of AIDS.
- Fifteen percent of males and 22% of females aged 15-24 could name four or more methods of HIV transmission; over half of female respondents and a third of male respondents aged 15-24 noted at least one incorrect method of HIV transmission; almost half of the respondents thought that HIV could be transmitted through kissing; fewer than a

quarter of respondents were aware that a child born to a mother who was HIV-positive would not always contract HIV; almost all respondents could correctly note symptoms of AIDS.

- Some 30-40% of those aged 15-24 and 70-75% of those aged 10-14 felt that a teacher who was HIV-positive should not be allowed to continue teaching; almost half of those aged 15-24 and 80-90% of those aged 10-14 felt that they would not purchase produce from a shopkeeper who was HIV positive.
- For those aged 15-24, 12% had ever been tested for HIV.
- Most of the youth did not feel at risk of sexual infections.
- One-fifth of all young people believed that a man with HIV could be cured by having sex with a virgin.
- Almost all youth had heard of condoms, and many had attended a condom demonstration; preferred sources for condoms were health facilities, followed by supermarkets, small shops, bars and chemists.
- Most young people held positive views about the need for condoms to be used if one is sexually active; 60-80% thought it is unrealistic to use a condom every time; many believed that condoms made sex less enjoyable.
- More young people were opting to delay the onset of sexual activity than in the past; those who had planned their first sexual intercourse were more likely to have used a condom than those who had not planned.
- Young people who used sexual and reproductive health services had positive attitudes; it was not clear why the majority of young people did not use the available services.

Varga CA, Sexual decision-making and negotiation in the midst of AIDS: youth in KwaZulu-Natal, South Africa, *Health Transition Review*, 1997, 7(Suppl. 3):45-67.

Geographic Coverage: Durban, South Africa.

Methodology and Sample: In-depth interviews of 63 adolescents (39 female antenatal clinic attenders aged 15-19 and 24 males aged 18-26 who had been involved in sexual relationships with adolescent women up to 19 years of age that had resulted in pregnancy and subsequent parenthood).

Purpose: To explore choices made by young people regarding when, how and with whom to have sex and the extent to which HIV/AIDS influences these choices.

Main Findings

- All female clinic attendees had heard about HIV/AIDS; 81% stated that the condition was fatal; nearly all viewed sex, multiple partners, shared razors and unprotected intercourse as means of disease transmission; effective modes of prevention most commonly cited were condoms (78%), abstinence (61%) and *ukusoma*, or external sex (13%).
- All males in the study had heard of AIDS, and about half felt it could pose a threat to the communities in which they lived [information not fully collected among male participants].
- Sixty-one percent of female participants felt AIDS-related issues were not appropriate to discuss with a partner; females were inclined to focus on lack of intimacy in the relationship as a reason for avoiding discussions of HIV/AIDS with partners; threat of rejection or stigmatization and fear of physical abuse or coercion were also mentioned as barriers to communication.
- Male participants frequently discussed disbelief in existence of AIDS and the opinion that it is the female partner's responsibility to protect against HIV infection.
- Implicit in both males' and females' comments was the notion of trust in one's partner as a safeguard against contracting HIV/AIDS.
- Neither males nor females mentioned HIV/AIDS in the context of decisions to initiate sex with a new partner or to engage in practices such as condom use or monogamy.
- Condom use appeared to play a minor role in male participants' contraceptive practices and was not a topic of discussion with partners.
- Over half the females said they avoided discussion of or requesting use of condoms.
- The predominant justification for avoiding condoms was trust and fidelity.
- Youth expressed a general tendency to avoid communication; awareness of HIV/AIDS was not a factor in adolescents' sexual decision-making and communication.

Varga CA, South African young people's sexual dynamics: implications for behavioural responses to HIV/AIDS, in: Caldwell JC et al., eds., *Resistances to Behavioural Change to Reduce HIV/AIDS Infection in Predominantly Heterosexual Epidemics in Third World Countries, Canberra, Australia: Australian National University, National Centre for Epidemiology and Population Health, Health Transition Centre, 1999, pp. 13-34.*

Geographic Coverage: Subdistrict of Umzinto-Vulamehlo, South Africa.

Methodology and Sample: Twelve focus group discussions among 11-24-year-olds.

Purpose: To identify factors that hinder or facilitate behavior change.

Main Findings

- Participants were aware of the benefits and need to practice safer sex; however, questions remained as to the extent to which potential behaviors would be upheld in the context of individuals' own sex lives.
- Participants expressed concern about introducing condom use into a relationship; many traditional stigmas (such as endangering trust) surrounding condom use were given as a reason to refuse protected sex.
- Males generally initiated sexual advances, and there was very little direct communication or negotiation on the issue prior to its occurrence.
- Pressure to have sex was another identified barrier; young people felt pressure to incorporate sex into their social lives from an early age; multiple partnerships appear to be a requirement for peer acceptance.
- Forced intercourse was depicted as the "norm"; gender-based violence and coercion were an integral component of youth sexual culture.
- Different sexual standards operate for men and women; men are primary decision-makers concerning sexual matters; women experienced cultural constraints in negotiating safer sex.
- Social stigma was attached to HIV as a barrier to safer sex practices.

Varga CA, The forgotten fifty per cent: a review of sexual and reproductive health research and programs focused on boys and young men in Sub-Saharan Africa, *African Journal of Reproductive Health*, 2001, 5(3):175-195.

Geographic Coverage: Sub-Saharan Africa.

Methodology and Sample: Review of existing literature on sexual and reproductive health research and programming among boys and young men.

Purpose: To serve as a basis for the development of male youth-focused messages and foster greater attention to boys and young men in regional research, programs and policies.

Main Findings

- Proposes a modified framework (by adding element of sexual knowledge and awareness into the original framework which consists of interrelated elements of sexual partnerships, sexual acts, sexual meanings, and sexual drives) of how sexuality and gender influence reproductive outcomes.
- Vulnerability to HIV infection is heavily influenced by sociocultural factors and societal norms, particularly gender and sexuality.
- The knowledge, attitude and practice gap (i.e. that knowledge and awareness do not necessarily translate into behavior change), suggests the need for greater consideration of sociosexual environmental factors that guide sexual and reproductive behavior.
- Overall, boys engage in riskier behaviors than girls; boys report initiating sex earlier than girls, have more sex partners, have intercourse more often and are more likely to report having had a STI.
- Early data showed that young men engage in unprotected sex because they do not perceive themselves at risk of HIV infection and because of social pressure (sexual prowess); more recent studies suggest that young men have begun to incorporate partner reduction and more regular condom use into their sexual practices as a result of recognizing the personal threat of HIV.
- Risk assessments are generally based on social reputation, physical appearance, personal hygiene and even family background.
- Physical violence and sexual coercion by male partners appear common (some studies show that

they are seen as socially acceptable and even symbols of love and commitment).

- Contraceptive use is low and erratic; contraceptive use carries less stigma for men than for women; men have greater knowledge and general approval of contraceptive use than women; male acceptance of protected sex in general appears adequate, but adopting preventive practices remains problematic.
- Many adolescent males are ill informed rather than uninformed about reproductive facts; specific matters regarding HIV are not clearly understood (e.g., the difference between HIV and AIDS).
- There is a need to better understand conditions surrounding male youths' sexual initiation and early sexual experience (whom boys initiate sex with and under what circumstances; and to what extent abuse, coercion and material or other forms of dependence are involved; how men's patterns of partner selection change over time; and what impact shifts in sexual networks have on their risk for HIV infection).
- Studies often overlook the fact that the type and frequency of contraceptive use among adolescents vary widely according to sexual experience, parity and the nature of relationship; few studies provide insight into the circumstances surrounding the conditions of contraceptive choice.
- Almost no work has focused on young men's experience of abuse or rape, homosexual or bisexual behavior, oral sex, masturbation or patterns of other sexual practices, such as anal sex.

Venier JL, Ross MW and Akande A, HIV/AIDS related social anxieties in adolescents in three African countries, *Social Science and Medicine*, 1998, 46(3):313-320.

Geographic Coverage: Nigeria, Kenya and Zimbabwe.

Methodology and Sample: Self-administered questionnaire (33-item AIDS Social Assertiveness Scale) to adolescents in grade 10 (sample sizes, 387 in Nigeria, 274 in Kenya and 313 in Zimbabwe).

Purpose: To examine the social anxieties associated with HIV prevention.

Main Findings

- Five factors were similar across the three countries: condom interactions, refusal of risk, confiding in significant others, contact with people with HIV/AIDS and general assertiveness.
- Contacts with people with HIV/AIDS were seen as being less anxiety-provoking; refusal of risk and confiding in significant others showed mean item scores on anxiety above those of general assertiveness.
- Kenyan students were found to be less anxious about social situations related to HIV/AIDS than Nigerian or Zimbabwean students.
- Female students tended to report lower anxiety than male students on measures related to condoms; in Nigeria and Kenya, female students tended to be more anxious about confiding in others than men; female students tended to be less anxious about being assertive than male students.

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Table 1. Most recent Demographic and Health Surveys† since 1990 and available indicators

Country	Year of most recent survey	Sexual Behavior Measures			HIV/AIDS Module‡
		Age at first intercourse	Current sexual activity	Number of sexual partners	
Benin	2001	Yes	Yes	Yes	Yes
Burkina Faso	1998/99	Yes	Yes	Yes	Yes
Cameroon	1998	Yes	Yes	Yes	Yes
CAR	1994/95	Yes	Yes	No	Yes
Chad Republic	1996/97	Yes	Yes	Yes	Yes
Comoros	1996	Yes	Yes	Yes	Yes
Côte D'Ivoire	1998/99	Yes	Yes	Yes	Yes
Eritrea*	2002	Yes	Yes	Yes	Yes
Ethiopia	2000	Yes	Yes	Yes	Yes
Gabon	2000	Yes	Yes	Yes	Yes
Ghana	1998	Yes	Yes	Men only	Yes
Guinea	1999	Yes	Yes	Yes	Yes
Kenya	1998	Yes	Yes	Yes	Yes
Madagascar*	1997	Yes	Yes	No	Yes
Malawi	2000	Yes	Yes	Yes	Yes
Mali	2001	Yes	Yes	Yes	Yes
Mauritania	2000/01	Yes	Yes	Men only	Yes
Mozambique	1997	Yes	Yes	Men only	Yes
Namibia*	1992	Yes	Yes	No	No
Niger	1998	Yes	Yes	Yes	Yes
Nigeria	1999	Yes	Yes	Yes	Yes
Rwanda	2000	Yes	Yes	Yes	Yes
Senegal	1997	Yes	Yes	No	Yes
South Africa*	1998	Yes	Yes	Yes	Yes
Tanzania	1999	Yes	Yes	Yes	Yes
Togo	1998	Yes	Yes	Yes	Yes
Uganda	2000/01	Yes	Yes	Yes	Yes
Zambia	2001/02	Yes	Yes	Yes	Yes
Zimbabwe	1999	Yes	Yes	Yes	Yes

*Data available for women only.

†DHS surveys are carried out by Macro International Inc. in collaboration with country organizations.

‡Modules include questions on HIV/AIDS knowledge, behavior and testing. Coverage varies across countries.

Name of index	Description	Years covered	Languages (beside English)	Sources
Anthropological Index Online	The Anthropological Index Online is based on the journal holdings of The Anthropology Library at the The British Museum (Museum of Mankind), which receives periodicals in all branches of anthropology, from academic institutions and publishers around the world.	1957 to the present	German, French and Spanish	ca. 800 journals
International Bibliography of the Social Sciences	The International Bibliography of the Social Sciences is compiled by the British Library of Political & Economic Science of the London School of Economics & Political Science. This database contains bibliographic information from an international selection of publications (including over 2,600 journals) in the fields of economics, political science, sociology and anthropology.	1951 to the present	70 foreign languages	Ca. 6,000 books and 2,600 journals
POPLINE	POPLINE, the world's largest database on reproductive health, provides more than 300,000 citations with abstracts to scientific articles, reports, books and unpublished reports on population, family planning and related health issues.	1827 to present; records added yearly after 1920	Ca. 60 foreign languages	Over 300,000 citations
Population Index	This bibliography is designed to cover the world's demographic and population literature, including books and monographs, serial publications, journal articles, working papers, doctoral dissertations and machine-readable data files.	1986-2000	Slavic languages, Asian languages	Ca. 400 journals
Sociological Abstracts	Sociological Abstracts abstracts and indexes the international literature in sociology and related disciplines in the social and behavioral sciences. The database provides abstracts of journal articles and citations to book reviews drawn from over 1,700 serials publications, and provides abstracts of books, book chapters, dissertations and conference papers.	1963 to the present	Ca. 30 foreign languages	Over 1,700 serial publications (600,000 records)

Table 3. Selected studies on HIV/AIDS and youth, classified by main topics

Author	Coverage: National, Subnational, or Comparative	Focus				
		Knowledge and attitudes	Sexual behavior	Protective sexual behavior†	Health-seeking behavior/ use of services	Context/ sociocultural factors
Adih WK and Alexander CS, 1999	S			X		
Ajuwon AJ, Fawole F and Osungbade K, 2000	S	X	X			
Akinyemi Zacch et al., 1996	S	X	X	X		
Anarfi JK, 1997	S	X	X			X
Anarfi JK and Antwi P, 1995	S	X	X			
Ankomah A, 1998	S			X		
Araoye MO and Adegoke A, 1996	S	X	X			
Arowojolu AO et al., 2002	S	X	X			
Asiimwe-Okiror G et al., 1997	S		X			
Awusabo-Asare K et al., 1999	S	X				
Bandawe CR and Foster D, 1996	S			X		
Bohmer L and Kirumira EK, 2000	S					X
Evelyn UI and Osafu O, 1999	S	X				
Fawole OI, Asuzu MC and Oduntan SO, 1999	S	X	X			
Feldman DA et al., 1997	S	X	X			
Ghana Social Marketing Foundation et al., 2000	N	X	X	X		
Gregson S et al., 2002	S		X			
Horizons, 2001	S, C				X	
Hulton LA, Cullen R and Wamala Khalokho S, 2000	S	X	X			
Kaaya SF, Leshabari MT and Mbwambo JK, 1998	REVIEW		X			X
Kasule J et al., 1997	S	X				
Kim YM, Marangwanda C and Kols A, 1997	N				X	
Kiragu K, 2001	REVIEW, C	X	X	X	X	X
Konde-Lule JK et al., 1997	S		X			
Konde-Lule JK, Sewankambo N and Morris M, 1997	S		X			
Leclerc-Madlala S, 1997	S	X				
Leclerc-Madlala S, 2002	REVIEW					X
Luke N and Kurz K, 2002	REVIEW, C		X			
MacPhail C and Campbell C, 2001	S			X		X
Magnani RJ et al., 2002	S		X	X		
Mahy M and Gupta N, 2002	N, C	X	X			
Maswanya ES et al., 1999	S	X	X	X		
Meekers D, Ahmed G and Molatlhegi MT, 2001	S			X	X	
Meekers D and Calvès AE, 1997	S		X			
Meekers D, Klein M and Foyet L, 2001	S		X	X		

Table 3. Selected studies on HIV/AIDS and youth, classified by main topics

Author	Coverage: National, Subnational, or Comparative *	Focus				
		Knowledge and attitudes	Sexual behavior	Protective sexual behavior†	Health-seeking behavior/ use of services	Context/ sociocultural factors
Meyer-Weitz A et al., 2000	S				X	
Muyinda H et al., 2001	S	X				X
Mwakagile D et al., 2001	S		X			
Nare C, Katz K and Tolley E, 1997	S				X	
Nwokocha ARC and Nwakoby BAN, 2002	S	X				
Nzioka C, 2001 (a)	S	X	X			
Nzioka C, 2001 (b)	S	X	X	X		
Oladapo MM and Brieger WR, 1996-1997	S	X	X			
Population Reference Bureau, 2001	REVIEW, N, C	X	X			
Pratt CB et al., 2000	S	X				
Rutenberg N et al., 2001 (a)	S	X				X
Rutenberg N et al., 2001 (b)	S	X				X
Rwenge M, 2000	S	X	X			
Singh S, Darroch JE and Bankole A, 2002	N			X		
Stanton Bonita F et al., 1999	S	X	X			
St. Lawrence JS et al., 1995	S, C	X	X			
Swart-Kruger J and Richter LM, 1997	S	X	X			
Temin Miriam J et al., 1999	S	X				
Tengia-Kessy A, Msamanga GI and Moshiro CS, 1998	S		X			
Toroitch-Ruto C, 1997	N	X	X			X
UNFPA, PATH and PATHFINDER, 2002 (a)	S	X	X	X	X	
UNFPA, PATH and PATHFINDER, 2002 (b)	S	X	X	X	X	
Varga CA, 1997	S	X	X			
Varga CA, 1999	S		X			X
Varga CA, 2001	REVIEW, C	X	X			
Venier JL, Ross MW and Akande A, 1998	S, C	X				

*Indicates whether or not sample is national in scope (includes nationally representative samples); comparative refers to the inclusion of two or more countries in the study; subnational refers to a local area.

†Study focus is on condom use, abstinence or limiting number of partners.

Table 4. Selected studies, by type of research design and methodology used

Methodology	Author
QUANTITATIVE METHODS	<p>Adih WK and Alexander CS, 1999 Ajuwon AJ, Fawole F and Osungbade K, 2000 Akinyemi Z et al., 1996 Anarfi JK and Antwi P, 1995 Anarfi JK, 1997 Araoye MO and Adegoke A, 1996 Arowojolu AO et al., 2002 Asiimwe-Okiror G et al., 1997 Awusabo-Asare K et al., 1999 Bandawe CR and Foster D, 1996 Evelyn UI and Osafu O, 1999 Fawole OI, Asuzu MC and Oduntan SO, 1999 Feldman DA et al., 1997 Ghana Social Marketing Foundation et al., 2000 Gregson S et al., 2002 Horizons, 2001 Kasule J et al., 1997 Konde-Lule JK et al., 1997 Konde-Lule JK, Sewankambo N and Morris M, 1997 Magnani RJ et al., 2002 Mahy M and Gupta N, 2002 Maswanya ES et al., 1999 Meekers D, Klein M and Foyet L, 2001 Meyer-Weitz A et al., 2000 Mwakagile D et al., 2001 Nare C, Katz K and Tolley E, 1997 Nwokocha ARC and Nwakoby BAN, 2002 Oladapo MM and Brieger WR, 1996-1997 Pratt CB et al., 2000 Rutenberg N et al., 2001 (a) Rutenberg N et al., 2001 (b) Rwenge M, 2000 Singh S, Darroch JE and Bankole A, 2002 Stanton BF et al., 1999 St. Lawrence JS et al., 1995 Tengia-Kessy A, Msamanga GI and Moshiro CS, 1998 Toroitich-Ruto C, 1997 UNFPA, PATH and PATHFINDER, 2002 (a) UNFPA, PATH and PATHFINDER, 2002 (b) Venier JL, Ross MW and Akande A, 1998</p>
Self-administered questionnaire	<p>Araoye MO and Adegoke A, 1996 Arowojolu AO et al., 2002 Bandawe CR and Foster D, 1996 Fawole OI, Asuzu MC and Oduntan SO, 1999 Kasule J et al., 1997 Maswanya ES et al., 1999 Nwokocha ARC and Nwakoby BAN, 2002 Oladapo MM and Brieger WR, 1996-1997 Stanton BF et al., 1999 St. Lawrence JS et al., 1995 Toroitich-Ruto C, 1997 Venier JL, Ross MW and Akande A, 1998</p>

Table 4. Selected studies, by type of research design and methodology used

<p><i>Interviewer-administered questionnaire</i></p>	<p>Adih WK and Alexander CS, 1999 Ajuwon AJ, Fawole F and Osungbade K, 2000 Akinyemi Z et al., 1996 Anarfi JK and Antwi P, 1995 Anarfi JK, 1997 Asiimwe-Okiror G et al., 1997 Awusabo-Asare K et al., 1999 Evelyn UI and Osafu O, 1999 Feldman DA et al., 1997 Ghana Social Marketing Foundation et al., 2000 Gregson S et al., 2002 Horizons, 2001 Konde-Lule JK et al., 1997 Konde-Lule JK, Sewankambo N and Morris M, 1997 Magnani RJ et al., 2002 Meekers D, Klein M and Foyet L, 2001 Meyer-Weitz A et al., 2000 Mwakagile D et al., 2001 Nare C, Katz K and Tolley E, 1997 Pratt CB et al., 2000 Rutenberg N et al., 2001 (a) Rutenberg N et al., 2001 (b) Rwenge M, 2000 Tengia-Kessy A, Msamanga GI and Moshiro CS, 1998 UNFPA, PATH and PATHFINDER, 2002 (a) UNFPA, PATH and PATHFINDER, 2002 (b)</p>
<p><i>Analysis of secondary data</i></p>	<p>Mahy M and Gupta N, 2002 Population Reference Bureau, 2001 Singh S, Darroch JE and Bankole A, 2002</p>
<p>QUALITATIVE METHODS</p>	<p>Akinyemi Z et al., 1996 Anarfi JK and Antwi P, 1995 Anarfi JK, 1997 Ankomah A, 1998 Bohmer L and Kirumira EK, 2000 Feldman DA et al., 1997 Gregson S et al., 2002 Horizons, 2001 Hulton LA, Cullen R and Wamala Khalokho S, 2000 Kim YM, Marangwanda C and Kols A, 1997 Leclerc-Madlala S, 1997 MacPhail C and Campbell C, 2001 Meekers D and Calves AE, 1997 Meekers D, Ahmed G and Molatlhegi MT, 2001 Muyinda H et al., 2001 Nare C, Katz K and Tolley E, 1997 Nzioka C, 2001 (a) Nzioka C, 2001 (b) Pratt CB et al., 2000 Swart-Kruger J and Richter LM, 1997 Temin Miriam J et al., 1999 UNFPA, PATH and PATHFINDER, 2002 (a) UNFPA, PATH and PATHFINDER, 2002 (b) Varga CA, 1997 Varga CA, 1999</p>

Table 4. Selected studies, by type of research design and methodology used

<p><i>Focus group</i></p>	<p>Akinyemi Z et al., 1996 Anarfi JK and Antwi P, 1995 Anarfi JK, 1997 Ankomah A, 1998 Feldman DA et al., 1997 Gregson S et al., 2002 Horizons, 2001 Hulton LA, Cullen R and Wamala Khalokho S, 2000 MacPhail C and Campbell C, 2001 Meekers D and Calves AE, 1997 Meekers D, Ahmed G and Molatlhegi MT, 2001 Muyinda H et al., 2001 Nare C, Katz K and Tolley E, 1997 Nzioka C, 2001 (a) Nzioka C, 2001 (b) Pratt CB et al., 2000 Swart-Kruger J and Richter LM, 1997 Temin MJ et al., 1999 UNFPA, PATH and PATHFINDER, 2002 (a) UNFPA, PATH and PATHFINDER, 2002 (b) Varga CA, 1999</p>
<p><i>Individual in-depth interview</i></p>	<p>Anarfi JK, 1997 Ankomah A, 1998 Gregson S et al., 2002 Horizons, 2001 Leclerc-Madlala S, 1997 Muyinda H et al., 2001 Varga CA, 1997</p>
<p><i>Peer discussion group</i> <i>Mystery client visits</i> <i>Observation</i> <i>Simulation games</i></p>	<p>Bohmer L and Kirumira EK, 2000 Nare C, Katz K and Tolley E, 1997 Gregson S et al., 2002 Kim YM, Marangwanda C and Kols A, 1997 Muyinda H et al., 2001</p>
<p>BOTH QUANTITATIVE AND QUALITATIVE METHODS</p>	<p>Akinyemi Z et al., 1996 Anarfi JK and Antwi P, 1995 Anarfi JK, 1997 Feldman DA et al., 1997 Gregson S et al., 2002 Horizons, 2001 Nare C, Katz K and Tolley E, 1997 Pratt CB et al., 2000 UNFPA, PATH and PATHFINDER, 2002 (a) UNFPA, PATH and PATHFINDER, 2002 (b)</p>
<p>BIOMARKER DATA</p>	<p>Gregson S et al., 2002 Konde-Lule JK et al., 1997 Konde-Lule JK, Sewankambo N and Morris M, 1997 Mwakagile D et al., 2001 Tengia-Kessy A, Msamanga GI and Moshiro CS, 1998</p>
<p>LITERATURE REVIEW</p>	<p>Kaaya SF, Leshabari MT and Mbwambo JK, 1998 Kiragu K, 2001 Leclerc-Madlala S, 2002 Luke N and Kurz K, 2002 Varga CA, 2001</p>

Table 5. Selected studies, by geographic coverage

Country	Author
Worldwide	Kiragu K, 2001
Sub-Saharan Africa	Leclerc-Madlala S, 2002 Luke N and Kurz K, 2002 Mahy M and Gupta N, 2002 Population Reference Bureau, 2001 Varga CA, 2001
Botswana	Meekers D, Ahmed G and Molatlhegi MT, 2001 UNFPA, PATH and PATHFINDER, 2002 (b)
Cameroon	Meekers D and Calves AE, 1997 Meekers D, Klein M and Foyet L, 2001 Rwenge M, 2000
Ghana	Anarfi JK and Antwi P, 1995 Anarfi JK, 1997 Adih WK and Alexander CS, 1999 Ankomah A, 1998 Awusabo-Asare K et al., 1999 Ghana Social Marketing Foundation et al., 2000
Kenya	Horizons, 2001 Nzioka C, 2001 (a) Nzioka C, 2001 (b) Pratt CB et al., 2000 Toroitich-Ruto C, 1997 Venier JL, Ross MW and Akande A, 1998
Malawi	Bandawe CR and Foster D, 1996
Namibia	Stanton BF et al., 1999
Nigeria	Akinyemi Z et al., 1996 Ajuwon AJ, Fawole F and Osungbade K, 2000 Araoye MO and Adegoke A, 1996 Arowojolu AO et al., 2002 Evelyn UI and Osafu O, 1999 Fawole OI, Asuzu MC and Oduntan SO, 1999 Nwokocha ARC and Nwakoby BAN, 2002 Oladapo MM and Brieger WR, 1996-1997 St. Lawrence JS et al., 1995 Temin MJ et al., 1999 Venier JL, Ross MW and Akande A, 1998
Senegal	Nare C, Katz K and Tolley E, 1997

Table 5. Selected studies, by geographic coverage

South Africa	<p>Leclerc-Madlala S, 1997 Leclerc-Madlala S, 2002 MacPhail C and Campbell C, 2001 Meyer-Weitz A et al., 2000 Rutenberg N et al., 2001 (a) Rutenberg N et al., 2001 (b) Swart-Kruger J and Richter LM, 1997 Varga CA, 1997 Varga CA, 1999</p>
Tanzania	<p>Kaaya SF, Leshabari MT and Mbwambo JK, 1998 Maswanya ES et al., 1999 Mwakagile D et al., 2001 Tengia-Kessy A, Msamanga GI and Moshiro CS, 1998</p>
Uganda	<p>Asiimwe-Okiror G et al., 1997 Bohmer L and Kirumira EK, 2000 Horizons, 2001 Hulton LA, Cullen R and Wamala Khalokho S, 2000 Konde-Lule JK et al., 1997 Konde-Lule JK, Sewankambo N and Morris M, 1997 Muyinda H et al., 2001 Singh S, Darroch JE and Bankole A, 2002 UNFPA, PATH and PATHFINDER, 2002 (a)</p>
Zambia	<p>Feldman DA et al., 1997 Magnani RJ et al., 2002</p>
Zimbabwe	<p>Gregson S et al., 2002 Kasule J et al., 1997 Kim YM, Marangwanda C and Kols A, 1997 Venier JL, Ross MW and Akande A, 1998</p>

Table 6. Selected studies, by population subgroups

Subgroup characteristics	Author
Youth (general)	<p>Ankomah A, 1998 Asiimwe-Okiror G et al., 1997 Ghana Social Marketing Foundation et al., 2000 Gregson S et al., 2002 Horizons, 2001 Konde-Lule JK et al., 1997 Konde-Lule JK, Sewankambo N and Morris M, 1997 MacPhail C and Campbell C, 2001 Magnani RJ et al., 2002 Mahy M and Gupta N, 2002 Meekers D, Klein M and Foyet L, 2001 Population Reference Bureau, 2001 Pratt CB et al., 2000 Rutenberg N et al., 2001 (a) Rutenberg N et al., 2001 (b) Rwenge M, 2000 Singh S, Darroch JE and Bankole A, 2002 Tengia-Kessy A, Msamanga GI and Moshiro CS, 1998 UNFPA, PATH and PATHFINDER, 2002 (a) UNFPA, PATH and PATHFINDER, 2002 (b) Varga CA, 1999</p>
In-school youth	<p>Araoye MO and Adegoke A, 1996 Arowojolu AO et al., 2002 Awusabo-Asare K et al., 1999 Bandawe CR and Foster D, 1996 Evelyn UI and Osafu O, 1999 Fawole OI, Asuzu MC and Oduntan SO, 1999 Kasule J et al., 1997 Leclerc-Madlala S, 1997 Maswanya ES et al., 1999 Nwokocha ARC and Nwakoby BAN, 2002 Nzioka C, 2001 (a) Nzioka C, 2001 (b) Oladapo MM and Brieger WR, 1996-1997 Stanton BF et al., 1999 St. Lawrence JS et al., 1995 Temin MJ et al., 1999 Toroitich-Ruto C, 1997 Venier JL, Ross MW and Akande A, 1998</p>
Out-of-school youth	<p>Bohmer L and Kirumira EK, 2000</p>
Both in-school and out-of-school youth	<p>Akinyemi Z et al., 1996 Feldman Douglas A et al., 1997 Hulton LA, Cullen R and Wamala Khalokho S, 2000 Meekers D and Calves AE, 1997 Meekers D, Ahmed G and Molatlhegi MT, 2001</p>
Youth seeking services at a clinic	<p>Kim YM, Marangwanda C and Kols A, 1997 Meyer-Weitz A et al., 2000 Mwakagile D et al., 2001 Nare C, Katz K and Tolley E, 1997 Varga CA, 1997</p>
Males only	<p>Adih WK and Alexander CS, 1999 Nzioka C, 2001 (b) Swart-Kruger J and Richter LM, 1997</p>
Females only	<p>Ajuwon AJ, Fawole F and Osungbade K, 2000 Evelyn UI and Osafu O, 1999 Muyinda H et al., 2001</p>
Young fathers	<p>Varga CA, 1997</p>
Street youth	<p>Anarfi JK and Antwi P, 1995 Anarfi JK, 1997 Swart-Kruger J and Richter LM, 1997</p>